



The Resonator

Official Newsletter of The Fair Lawn (NJ) Amateur Radio Club

Volume 5, Number 5

www.FairLawnARC.org

May 2020

Field Day Ala Carte

Usually the May issue of this newsletter would have a lot to say about the preparations for Field Day. As the adage goes, the congregation builds a church in anticipation of Christmas and a ham radio club does the same for Field Day. It is the peak of club interest and member activity. No two clubs do it alike. Some take it a wee bit more seriously than others. And on and on...

This year will be different. With a lockdown in order in the near term and restrictions on group and municipal recreational activity likely through the Spring, you are on your own. Your own set-up and take-down. Your own barbeque. Set up in your shack, your porch, or a tent in the backyard.

But, as with any crisis, do not waste the opportunity. Put up a station and get on the air. Even if it is just for a couple of hours. If nothing else, make notes about how next year's Field Day can be better than ever. But let us know what you are doing so we might network ourselves despite being apart. Hanging together is indeed better than hanging alone. Our historical apologies.

Latest guidance on Field day is here:

<http://www.arrl.org/field-day>

From The President:

A new month has just begun and under the circumstances, we have been able to stay in touch as best as we can and it is good to know that many of you are doing well. We still have a few members we haven't heard about. That is why, during the next few days, a group of volunteers from FLARC will be reaching out to members we have not been able to know how they are doing. I truly believe that it is important we know how our FLARC brothers and sisters are dealing with this situation and if we may be of any assistance. You can always reach me at np4h@arrl.net; it's always good to keep in touch and see how things are going.

Starting this month, we will bring back our Kawfee Tawks to FLARC. On Friday, May 8th, Bob N2SU will start our Virtual Kawfee Tawks with a presentation on 6 Meters, the magic band. I am sure that it will come with great information and offer the opportunity for those present to ask questions, learn more about this interesting band and at the same time spend time with each other. Details on how to join the video conference are available in this edition of The Resonator.

We have already lined up a couple of more Kawfee Tawks so remember that if there is a topic you wish to share to the membership, we would love to hear it. Drop me a line and we'll get you in the schedule.

I would like to take this opportunity to thank all of those who are ALWAYS willing and able to say PRESENT when help is needed for the club or a member. We've had a several instances this month where members have come up to lend a helping hand. You know who you are, and we truly value your efforts and dedication.

To all of you, please, stay safe, be healthy and "I'll see ya on the radio".

73,
Nomar, NP4H
FLARC President

INSIDE THIS ISSUE

- 1** **President's Message**
- 11** **Member Profile – Ahmed Abdelsayed NJ8Y**
- 3** **FL ARES & RACES Corner**
- 4** **Club Calendar**
- 13** **The Way We Were - continuing series**
- 43** **Connecting A Repeater – Bob Holstrom KD2BKD**
- 39** **Around The Shack – Hal Kennedy N4GG**
- 30** **Who Made it??**
- 50** **Business Meeting Notes**

Fellow FLARC Members,

As we all know, the coronavirus is top of the news and that the club is closed until further notice. Out of an overabundance of caution and our care for your safety, all FLARC events are postponed until further notice due to COVID-19.

We will monitor the situation with regards to re-opening the club and the use of both the Recreation and Senior Centers in coordination with the Borough.

Check in on our nightly health and welfare net on the W2NPT repeater at 7:00 PM and let us know how you're doing. You may be isolated at this time but you are not alone.

We want to continue to draw your attention to The Centers for Disease Control and Prevention (CDC)'s preventative measures to help ensure the health and safety of our members:

1. Avoid close contact with people who might be sick.
2. Cover your cough or sneeze with a tissue, then throw the tissue in the trash.
3. Avoid touching your eyes, nose, and mouth.
4. Clean and disinfect frequently touched objects and surfaces.
5. Stay home when you are sick, except to get medical care.
6. Wash your hands often with soap and water for at least 20 seconds.

Some videos with important info about hand washing: CDC and WHO.

For further information and to keep up-to-date please visit the CDC website.

<https://www.cdc.gov>

Thank you for your attention and care. Stay safe.

73

Nomar NP4H

May 1, 2020

The Club Fair Lawn ARC is the fastest growing ham club around, with five operating positions in a permanent clubhouse. Visitors and guests are always welcome. The club is open every Friday night from NLT 6:30 PM. Business meetings are the first Friday of the month at 7:30PM.

2020 Officers, Committees and Assignments

President	Nomar Vizcarrando	NP4H
Vice President	John L. Howard	W2JLH
Treasurer	Al Rasmussen	WA2OWL
Secretary	Randy Smith	WU2S
Trustee	Skip Barker	KD2BRV
Trustee	Ed Efchak	WX2R
Trustee	Don Cassarini	N2PRT
Field Day	Steve Wraga	WA2BYX
Member Services	Judith Shaw	KC2LTM
Publicity	Ed Efchak	WX2R
Publicity	Gene Ottenheimer	WO2W
Publicity	Judith Shaw	KC2LTM
Publicity	Susan Frank	W6SKT
Program	Lowell Vant Slot	W2DLT
Publicity	Karl Frank	W2KBF
Publicity	Nomar Vizcarrando <i>(ex officio)</i>	NP4H
Social Media	Dave Marotti	NK2Q
Video/YouTube	Thom Guida	W2NZ
VE Liaison	Gene Ottenheimer	WO2W
VE Liaison	Pete Senesi	KD2BMX
Education	Gordon Beattie	W2TTT
Education	Randy Smith	WU2S
Education	John L. Howard	K2JLH
Education	Fred Wawra	W2ABE
History	Fred Belghaus	W2AAB
Health and Welfare	Judith Shaw	KC2LTM
Photographer	Don Cassarini	N2PRT
W2NPT Trustee	Paul Cornett	W2IP
Technical	Paul Cornett	W2IP
Technical	Randy Smith	WU2S
Technical	Fred Wawra	W2ABE
RACES Director	Dave Gotlib	KD2MOB
RACES Liaison	Steve Wraga	WA2BYX
Newsletter Editor	Ed Efchak	WX2R
FL Town Liaison	Gene Ottenheimer	WO2W
Net Scheduler	Brian Cirulnick	KD2KLN
Quartermaster	Brian Cirulnick	KD2KLN

Fair Lawn RACES/ARES Corner



As we move into May, warmer weather usually gives us additional outdoor activities, however this year has been different than all other years due to COVID-19. Instead, we've increased our messaging skills and we plan to continue to get better and stronger at messaging. I'd like to thank Hank WA2CCN and Karl W2KBF for leading these messaging discussions.

Please note the new time of the FL-ARES KB2FLA nets. They are now taking place on Wednesdays at 1830 hours on the FLARC Repeater. Please join us every Wednesday for any updates, messages or activities which may take place.

Here's some additional news: the W2NPT Repeater is now linked to the NJ2BS Repeater through KD2BKD-L on Echolink. With the new link, our footprint in Bergen County as well as the surrounding area on the 2 meter band has expanded! A special thanks goes out to Gordon W2TTT who owns the NJ2BS Repeater and Bob KD2BKD for linking the repeaters. Also, a thank you goes to Paul W2IP for making it happen on the W2NPT end.

The Fair Lawn ARC Repeater info is: RX 145.47 MHz / TX 144.87, PL Tone 167.9 Hz. Echolink W2NPT-R.
The NJ2BS Repeater info is: RX 146.835 MHz / TX 146.235, PL Tone 151.4 Hz. Echolink KD2BKD-L.

Please sign up for various nets and activities taking place, at the following email address:

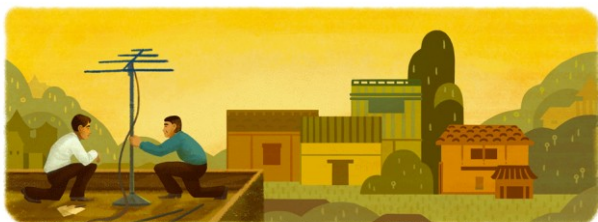
<https://arrl.volunteerhub.com/lp/nnj>

Continued on page 39

MASTER EVENT CALENDAR

Out of an overabundance of caution and our care for your safety, (not to mention state law) all FLARC events are postponed or rescheduled until further notice due to COVID-19.

May 8, 2020	Kawfee Tawk: Six Meters * The Magic Band * ON-LINE with Zoom
June 12, 2020	Kawfee Tawk: Intro to DMR Digital Mobile Radio * ON-LINE with Zoom
June 14, 2020	Fair Lawn Spring Street Fair (Radburn) (tentative)
June 27-28, 2020	ARRL FIELD DAY – Memorial Park (tentative)
July 17, 2020	Kawfee Tawk: Tesla - the man (not the car!)
August 21, 2020	FLARC 3 rd Annual Vintage Night – Senior Center
September 18, 2020	Lowell Van't Slot W2DLT "Working the CQWW SSB Contest At A Caribbean Superstation" – Senior Center
October 16, 2020	Hal Kennedy N4GG "Spark At FLARC" Via Skype – Senior Center
October 18, 2020	Fair Lawn Fall Street Fair (River Road)
TBD	Neil D Goldstein W2NDG "Raspberry Pi And Digital Operating"
TBD	Return Visit To iHeartRadio/WSUS transmitter
TBD	Field Trip to Sarnoff Center, Princeton
TBD	Wayne Smith WB2ONZ "The Civil Air Patrol: A Contemporary View" – Senior Center TO BE RESCHEDULED
TBD	Rich Moseson W2VU "75 Years of CQ Magazine" – Senior Center TO BE RESCHEDULED
	** 2nd Friday of mon



Hidetsugu Yagi's 130th Birthday Google Doodle

Follow FLARC ON THE WEB

Facebook: <http://facebook.FairLawnARC.org>

Twitter: @FairLawnARC

Blog: <http://blog.FairLawnARC.org>

Youtube: <http://youtube.FairLawnARC.org>

Website: <http://FairLawnARC.org>

FLARC VEC Exams

All FLARC events are postponed or rescheduled until further notice due to COVID-19.

Our next test sessions are scheduled **TBD** beginning at 09:00 at the Community Center. No advanced registration is required but always appreciated. The fee is \$15.00 (cash or check).

Please bring positive identification (license, passport, etc.), your original license and a copy, original CSCE and a copy (if credit is needed).

The full exam schedule is on the club calendar at the FairLawnARC.org website. For further information contact VE-Liason@FairLawnARC.org.

Please refer also to the "License Exams" link on the main website--

<http://bit.ly/FLARC-Testing>

Interested in Chasing DX?

A casual group of FLARCers including Van W2DLT, John KD2NRS, Brad KM2C, Karl W2KBF, Nomar NP4H, Steve WI2W, Jim W2JC, Larry WA2ALY and Fred W2AAB have formed an email group to keep each other in touch in (real) time of when the rare or interesting ones show up to chase.

Interested? See or contact Van W2DLT.

Answer The Census!

You'll be required by law to complete your US Census form. The club is an active sponsor of Fair Lawn's Complete Count 2020 initiative, so your support is important. So far the response rate for Fair Lawn is approaching 70%; ahead of projections.



Equipment Problem?

If you encounter a piece of club equipment, instrument or tool that is not working correctly or is broken in any way, we now have a Trouble Report form that you can use to describe the problem and report it to the Technical Committee -- who will arrange for repair.

The form can be found on the literature rack across from Position 2.

2020 -- The Year of Learning!



Brad KM2C talks through the Flex equipment to kick off the Year of Learning back on January 10th

Please Note: Operating at W2NPT

Starting in January 2019 club trustees have sign-in sheets for all operating positions. There is a clipboard at Operating Position #1, #2 (digital) and #4 with a form on which to sign up for half-hour time slots. No longer first come-first served, in fairness to all who want to use our club equipment and the new antennas.

Get Direct With FLARC!

Here is a direct link to specific club info: just a click away!

<http://apparel.FairLawnARC.org>
<http://auction.FairLawnARC.org>
<http://blog.FairLawnARC.org>
<http://calendar.FairLawnARC.org>
<http://events.FairLawnARC.org>
<http://exams.FairLawnARC.org>
<http://facebook.FairLawnARC.org>
<http://news.FairLawnARC.org>
<http://swap.FairLawnARC.org>
<http://tech.FairLawnARC.org>
<http://youtube.FairLawnARC.org>

NEW !

<https://groups.io/g/FairLawnARC>



April 2020 Blog Traffic

With coronavirus dominating the news, both visitors and page views to the blog were down this month. We've also done more email communications to members.

	April 2020	April 2019	% Change
Views	396	603	- 34%
Visitors	215	287	- 25%
Posts	6	13	- 54%

There is new content nearly every day so it's really worth the look at both FairLawnARC.org and the blog.

<http://blog.FairLawnARC.org>

FLARC Health and Welfare Net Featured On *Ham Nation* Podcast

The club's first in the nation effort of creating a Covid-19 health and welfare net was the lead topic of the April 22nd *Ham Nation* podcast hosted by Bob Heil K9EID and Gordon West WB6NOA.

Club PIO [Public Information Officer] Ed WX2R was the club's spokesperson in a ten minute live segment. Ed provided a bit of background on the club and the impact to the club of the situation near New York City — with the immense outbreak of the virus.

He then described the creation of the net with Dave KD2MOB, Stan KC2K, Gene WO2W and Ron KC2TBD starting the net and carrying the idea forward. The podcast discussed the purpose of the net, its average size, topics both fun and serious, our linking of the two area repeaters and how the club is extending its outreach to get in touch with members during the crisis and a move to restarting member programs.

The interview concluded with a light discussion about the club, and *The Resonator* came up as a topic. After the program ended, Ed received requests from many hams including Australia and Alaska for copies and to be added to our subscription list. The Alaska ham (KL7HRO Dennis in Two Rivers, Alaska) also checked in to the H&W net on April 23rd.

Ham Nation is the nation's largest amateur podcast with an estimate from 60,000-80,000 viewers on a weekly basis. Heil had first contacted Ed about two weeks ago and then reached out again on the 22nd and asked him if he would be willing to speak that night about the club's efforts.

Ed thought the interview went decently well given the short notice but you can judge for yourself. The link is below. It is at the top of the program running (again) about ten minutes.

[Ham Nation April 22 2020](https://www.youtube.com/watch?v=XwpPeBXK418)

<https://www.youtube.com/watch?v=XwpPeBXK418>

The club's recent efforts have also been featured on QRZ, Southgate Amateur Radio News, ICQ Podcast (UK) and locally in TapInto, Patch, and The Daily Voice.

Amateur Radio Operating Course by The Amateur Radio Club of the National Electronics Museum via Zoom

While not a FLARC event, the above group is offering a series of courses on Thursday evenings from 6:30 to 9:30 pm, running weekly. There is no charge for attendance. Here is their program:

May 7	VHF/UHF Weak Signal Work Brian Skutt, N3IQ
May 14	Remote Station control over internet Ike Lawton, W3IKE
May 21	Digital Modes Alan Zimmerman, KM4MD Imaging Operating Mike Birdseye, K4DUM
May 28	Contesting Dan Zeitlin, K2YWE Logging Software Rol Anders, K3RA
June 4	Propagation Frank Donovan, W3LPL
June 11	Amateur Satellites Glenn Long, KC4KMY Portable (backpacking) operation Tom Jerardi, K3CXW Paul Stoetzer, N8HM
Jun 18	Disaster, Public Service, EMCOMM, and Traffic Handling Dave Prestel, W8AJR Andy Protigal, N3AWP
June 25	Setting Up an HF Station Alan Zimmerman, KM4MD

If you're interested, send an e-mail to Rol K3RA
roland.anders@comcast.net
<roland.anders@comcast.net>

Note: This is for information only and not an endorsement by the club.

The *Health and Welfare* Net's Positive Impact One Month Into The Covid-19 Lockdown

The response to the newly created *Health and Welfare* net nightly at 7PM have exceeded expectations.

Our three key nightly net controls have commented on the first month of the lockdown:

Nomar NP4H: *"At a time where social distancing is encouraged in order to avoid the spread of COVID-19 we at FLARC can remain close together using Amateur Radio to look out for each other and any needs our members and friends may have. Ham Radio, always present during good times, and not so good ones".*

Brian KD2KLN: *"The (health and welfare) Net not only serves the community by keeping us all in contact with one another, but provides useful and timely information about what stores have which supplies, who's open for business and who is not, and how to stay safe during this time of crisis."*

Dave KD2MOB: *"Reaching out to the amateur radio community is important during these days of isolation. It means a lot to reach out to see if anyone would like some help or just to say hi."*

Beginning on Tuesday, March 24th W2NPT has been linked with a nearby repeater to expand our geographic reach during the coronavirus epidemic.

W2NPT/R 145.47 PL 167.9 Hz in Fair Lawn, NJ and

NJ2BS/R 146.835 PL 151.4 Hz in Pearl River, NY

have now been linked.

STAY SAFE!
Radio Is Contagious
And It Won't Make You Sick.

Club Apparel — Get Them While They're **RED!**

Club apparel is always in vogue. Red is always "in" and your club friends all have them... you *want* a shirt or jacket for the next FLARC event! Great for Field Day!

Don't forget.... they're easy to order.

Go to www.hamthreads.com

or visit <http://apparel.FairLawnARC.org>

Check out the item selection that is posted on the FLARC website (with pictures and prices). Order the shirts or other items you want with either the regular FLARC logo or the still-cool 60th anniversary logo. Note: **RED** is the primary and preferred club standard shirt color.

And why not WEAR your nice red shirt when you come to the club, especially for meetings and events.



L to R: Randy WU2S and Karl W2KBF in Elizabeth last year.

2020 FLARC Speaker Series Locations:

SPEAKERS WHO ARE FLARC MEMBERS:
FLARC CLUBHOUSE

SPEAKERS WHO ARE INVITED GUESTS:
FAIR LAWN SENIOR CENTER

MEMBER DUES DEADLINE EXTENDED TO MAY 31ST

Given the current coronavirus situation, the FLARC Council has agreed to extend the deadline for 2020 member dues from March 31st until May 31st. The Council has recognized that members might have wanted to pay in-person at the Club prior to deadline or may require more time to pay given the disruption of jobs and/or work schedules.

Annual dues remain at \$25 and can be sent via mail to the clubhouse at 10-10 20th Street, Fair Lawn, NJ 07410. Mail is being collected on a less frequent basis. Make all checks payable to "Fair Lawn Amateur Radio Club". New member dues are \$20 and an application can be found at the club's website, www.FairLawnARC.org. Any questions can be directed to either Nomar NP4H (President) or Al WA2OWL (Treasurer).

BEQUEATHS AND DONATIONS

Planned gifts usually imply the family donation of amateur equipment to the club when someone has become a Silent Key. But it can be more. Club members might consider making a gift through a will or trust; gifts that help provide lifetime income to the club. Consult with your lawyer, estate planner or tax advisor if you feel such a gift is worthy.

About The Club

The Resonator is published monthly and is the official (and only) newsletter of The Fair Lawn Amateur Radio Club. FLARC was established in 1956 and has met continuously since inception. **The club is sponsored by the Borough of Fair Lawn.** The club meets every Friday at 6PM at the club station in The Fair Lawn Community Center, 10-10 20th Street, Fair Lawn, NJ. Business meetings are the first Friday of the month at 7:30 PM.

Visitors **ARE ALWAYS** welcome at our meetings.

FLARC operates the W2NPT repeater (145.470- PL 167.9) located high atop the Community Center. The analog repeater is open to all amateurs for use without restrictions.

The club has over one hundred paid members. Dues are currently \$25 per year/\$20 for new members.

For more information, please see our website, at <http://membership.FairLawnARC.org>

All content in *The Resonator* is protected by copyright ©.
No other use without permission.

Content and opinions expressed by contributors do not necessarily reflect the policies of the Fair Lawn Amateur Radio Club, its Officers or members. Contributors grant express permission to FLARC to distribute articles in this or any issue of The Resonator. Authors also grant express permission for the use and/or repurposing of these articles, in part or in full, in other publications with credit to the original author and to The Resonator. All material is copyright ©2020. Do not copy or reproduce any of this material without the written permission of FLARC.

"POP-UP TUESDAYS" HAVE BEEN CANCELLED

Check the club calendar, the club website and your email each week to check when we will resume.

PUBLICITY COMMITTEE NEWS

The Publicity Committee is seeking new members to help grow the club with its varied activities. Enthusiasm desired... no experience necessary. Contact Ed WX2R or any other committee member.



FAIR LAWN'S COMMUNICATIONS CENTER! *With New Antennas On The Roof!*



2020 Near and Far Net Check-In's

Now in its third year, the FLARC *Near and Far* net is chugging along each week. Here is list of our check-ins beginning on New Year's Night in no particular order. Mondays at 8PM on the repeater.

Call	Name
N2AAM	Dave
WO2W	Gene
W2DLT	Van
KD2MOB	Dave
W2JC	Jim
WI2W	Steve
N2SU	Bob
N2OEL	Noel
WX2R	Ed
W2AAB	Fred
KD2KLN	Brian
W2MSA	Noel
W2KBF	Karl
AC2ZU	Charlie
W3EH	George
KC2TBD	Ron
TG9AOR	Joe
N2OEL	Noel
N2JLF	Jim
W2TAB	Tom
KC2TBD	Ron
KA2YRA	Steve
WA2BYX	Steve
KD2BKD	Bob
KC2K	Stan
KA2YRA	Steve
WA2CCN	Hank
W2TTT	Gordon
NJ8Y	Ahmed
NJ2BK	Bruce
W2CQX	Dan
W2KNG	Jim
WK2T	Lee
W2NZ	Thom
K2PD	Don
KD2JIP	Dave
K2ZVL	Van
KC2ASA	Peter
W2AAB	Fred
KD2LRX	Jason

2019-20 Member Profiles

The year is now complete and here is a list of the 2019 monthly profiles. See past profiles elsewhere in *The Resonator* to check back in the archives to see each featured member's background.

Month	Name	Call Sign
January 2019	Dave	KD2JIP
February	Jim	K2ZO
March	Zach	KC2RSS
April	Bob	N2SU
May	Stan	KC2K
June	Steve	WA2BYX
July	Roger	K2RRB
August	Judith	KC2LTM
September	Chris	W2TU
October	Bob	N2SU
November	Bob	WA2ISE
December	Carol	KD2NMV
January 2020	Gordon	W2TTT
February	Chris	KD2JQZ
March	Glenn	KD2MDR
April	Steve	K2SAB
May	Ahmed	NJ8Y

Congratulations!

The March VE testing session was cancelled due to the cononavirus pandemic. So ... no test session results.

Name	Call	New License
No activity		



Past FLARC Member Profiles

Here is a list of past member features and we welcome your recommendations for new profiles -- including your own.

Month	Name	Call Sign
January 2016	Pete	KB2BMX
February	Marco	KC2ZMA
March	Ron	KC2TBD
April	Kai	K2TRW
May	Larry	WA2ALY
June	Dave	N8MAR
July	Steve	WI2W
August	Thom	W2NZ
September	Brian	KD2KLN
October	Brad	KM2C
November	Al	WA2OWL
December	George	W3EH
January 2017	Fred	W2ABE
February	Dave	KD2MOB
March	Randy	WU2S
April	Lee	KD2DRS
May	Gene	WO2W
June	Carol	KD2NMV
July	Kevin	KC2KCC
August	Robert	KD2NOG
September	Robert	KD2BKD
October	John	KD2NRS
November	Fred	W2AAB
December	Margaret	W2GB
January 2018	Brian	KD2OAZ
February	Bennett	KO2OK
March	Van	W2DLT
April	Aly	ALØY
May	Bruce	NJ2BK
June	Dave	N2AAM
July	Karl and Susan	W2KBF and W2SKT
August	Steve	KA2YRA
September	Paul	K2PJC
October	Skip	KD2BRV
November	Ed	WX2R
December	Tom	N2AAX

By the way, Randy (WU2S) has compiled a binder of all back issues of *The Resonator* and it's located in the club office. Thanks Randy!!!

Blood Donors Needed In This Time Of Emergency

The Red Cross and related organizations are in great need for blood donations since most corporate blood drives have been cancelled.

Communitybloodservices.com has a network of offices open during the week and would really welcome folks making appointments to donate blood.

Thanks!



**American
Red Cross**

NOW AVAILABLE **FREE** TO FLARC MEMBERS:

In December and January nearly 120 FLARC members took part in its annual member survey. One of the survey questions asked about your interests in ham radio — specifically what you wanted to learn more about.

A composite list of all 26 content-specific interests cross-referenced by member call sign has been created and available to you just for the asking.

It's a quick way to find out who has similar interests to yours in the club and to simplify who to look for when you have a question on a specific subject.

Just drop an email to wx2r@arri.net and type the word "survey" in the *Subject_box*... he will send it back directly to you ASAP.

Member Profile

NAME: Ahmed Abdelsayed CALL: N J 8 Y

What do you do/what did you do for a living?

I work in the information technology field. I have expertise in many areas, such as network and systems engineering, InfoSec, storage, virtualization, and most data center technologies. I hold various industry certifications from Cisco, VMware, and Palo Alto Networks. My last full-time job was a management position for a financial institution, where I managed a local team as well as an off-shore team. I currently do private consulting for small and medium-sized businesses.

How did you get interested in ham radio?

I was introduced to the world of Amateur radio at an information security conference. During the conference, I learned about SDR and the various things you can do with it. I was introduced to various software and gadgets such as GNU Radio, GQRX, HackRF, RTL-SDR, and many others.

They were running a fox hunt contest in the conference area, and they had multiple speakers talk about the various technologies and tactics used during the contest. The crowd was very enthusiastic about radio, and many people were recommending an amateur radio license; they even held VE sessions at the conference.

Shortly after my introduction, I went to the vendor area to buy an RTL-SDR and immediately started exploring the electromagnetic spectrum.

What parts of the hobby most interest you?

It wouldn't be an overstatement if I said that I like everything about the hobby. I was initially interested in the technical aspects, but then I found out how friendly and welcoming the ham community is.

So my interest is in all radio technologies, as well as meeting new friendly and knowledgeable operators.

Continued on next page

Looking To Upgrade Your License? Here Are Some Classes To Help!

Here is the summary of classes offered by our friends at the ARC² Radio Club during 2020.
[Dates are dependent on end of current emergency.]

Amateur Extra License Radio Class

June 6, Saturday, 9 am to 4 pm

June 7, Sunday, 9 am to 3 pm

General License Radio Class

September 19, Saturday, 8 am to 4:30 pm

September 20, Sunday, 8:30 am to 3 pm

Technician License Radio Class

November 21, Saturday, 8 am to 4 pm

November 22, Sunday, 9 am to 3 pm

Location:

Fairfield Red Cross Office

209 Fairfield Road, Fairfield, NJ 07004

Instructor: Bill Kelly

NB1LL.ARC2@gmail.com

201.615.8132

CHECK WITH BILL ON COURSE STATUS

May 2020 Near and Far Net Controls

Here is the roster for net controls for the upcoming month as reported by Brian KD2KLN:

Date	Net Control
May 4	NP4H
May 11	KD2MOB
May 18	KD2KLN
May 25	N2AAM

The Near and Far Net now averages close to 20 check-ins on an average week! Cool beans.

But we need more volunteers to be net controls - if everyone takes their turn it's less burden on the others. And it's easy.

Volunteer --- don't wait to be asked (unless you really want to be flattered).

Member Profile, continued.

**How did you first find out about FLARC?
What are your impressions of the club?**

I first got on the air last year, and my first contact was Gordon W2TTT on the 442 repeater.

Throughout talking with Gordon, he welcomed me and mentioned the various clubs in the area, such as BARA and FLARC. I have meant to visit FLARC for a while but never got the chance until COVID-19 hit us. During the pandemic, I heard about a Fair Lawn daily net and saw it as a good opportunity to get involved and meet the club members. I heard many stations mentioning that FLARC is the best club in the area, and I can see why the club has such a sentiment just by browsing the videos on the clubs YouTube channel.

What else can you tell the club about yourself and/or ham radio?

I have been taking things apart and tinkering around since my childhood. I was interested in circuits and electronics for a long time, and I was very inquisitive about computers and programming. As a result, I majored in computer engineering in college. I learned all the fun things during college, such as analog and digital circuits, Microcontrollers, Microprocessors, PLC, and VHDL. I became an officer of my IEEE student branch, and I was teaching a microcontroller (Intel 8051) workshop by my second year in college during the summer as part of our local IEEE branch activities. I also learned to work with many programming languages, from low-level programming in assembly, to very high-level programming such as Java and Python. I counted it once and found that I worked with 18 different programming and scripting languages, but the one that has always been near and dear to my heart was C. I love how efficient C is, and its syntax makes more sense than other languages. Lately, I have been trying to focus just on Python due to the wide availability of libraries, but I always find myself writing C syntax. Naturally, I was in love when I got introduced to radios and SDR; it is incredible to be able to write code that can directly interact with hardware that includes analog and digital circuits. SDR is the best thing that happened to radio.

Member Profile, continued.



Ahmed NJ8Y

FLARC Looks To Re-start “Kawfee Tawks” As Video Presentations In Early May

President Nomar NP4H has announced that the club will look to re-start the highly successful Kawfee Tawk member discussions as early as Friday, May 8th.

The first presenter will be Bob N2SU who will discuss six meter propagation. The club will utilize the Zoom meeting video platform.

Watch your emails for the confirmation of the dates and Bob's availability.

With the Senior Center in lockdown and with social distancing rules in place, there are no plans regarding the FLARC Speaker Series at the present time.



Bob N2SU

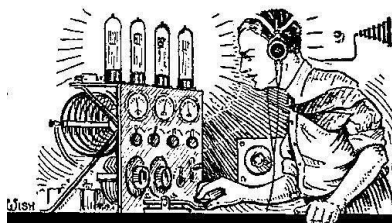


Image from May, 1926 QST, courtesy ARRL

The Way We Were -- By Fred Belghaus W2AAB

When Broadcast Stations Had "Ham" Call Letters

The earliest broadcast stations were either amateur or experimental stations that featured live or recorded music and other programming to a small audience of devoted "radio builders," consisting of both other amateur and non-amateur experimenters. Later, when broadcasting became profitable, these commercial interests had enough economic clout to influence governments to enact legislation prohibiting broadcasting by amateurs.

It wasn't long before some medium wave commercial radio stations discovered that they could increase their range and audience by operating high power shortwave transmitters in addition to their transmitters on the standard AM broadcast band.

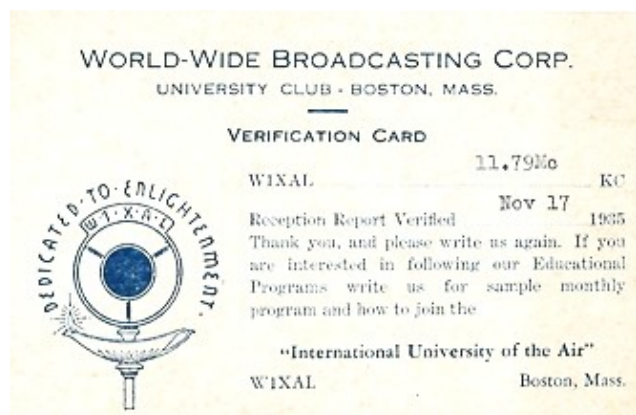
The commercial stations adding shortwave transmitters were issued experimental licenses. These licenses had call signs very much like those of amateurs, the first letter being a "W" indicating a U.S.A. license, followed by a number corresponding to the "radio district," or what we would now call the "call area," followed by a suffix, but with one exception—the first letter of the suffix was "X." An example would be W2XAA, a station located in the same geographical areas as an amateur station of the day, (New York City/Long Island, part of Northern New Jersey, and lower New York State), but the "X" in the call distinguishing it by being an experimental, rather than an amateur station.

There are many such examples of these stations operating in the late 1920s and throughout the 1930s. In this month's column, we will look at some of these stations and the QSL cards sent out by them, with some historical background of their operators.

Our first example is station W1XAL in Boston, Massachusetts. This station was first licensed in 1927 to Walter Lemmon, a radio experimenter.

By 1935, the station began broadcasting non-commercial educational programming, [2] as the Educational Broadcasting Corp. (shown on their QSL as the World-Wide Broadcasting Corp.) It billed itself as the "International University of the Air," and was helped financially through the efforts of Laurance S. Rockefeller as a philanthropic effort to promote educational efforts in broadcasting. [3]

Here's their QSL from 1935.

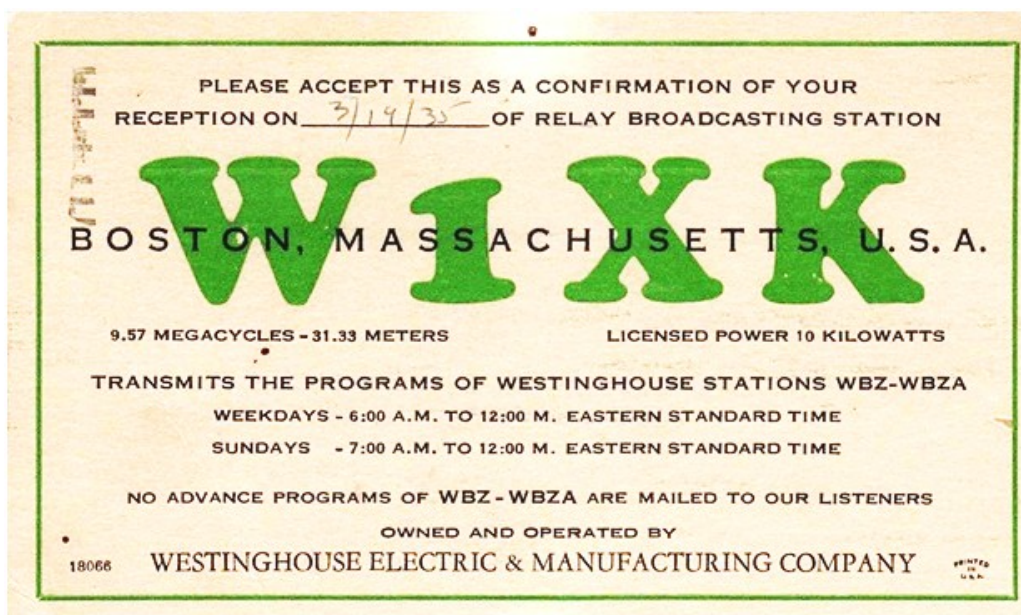


The Way We Were

In 1939, the station changed from an experimental to a regular broadcasting license, and its call letters changed to WSLA until September, [4] when it changed again to WRUL, which stood for "World Radio University Listeners." Because of its large international audience, the British Security Co-Ordination in New York, a covert branch of the British Secret Intelligence Service, began using it as a powerful disseminator of war propaganda for the British public, though without the station's knowledge. WRUL's broadcasts were also carried by some 300 other AM broadcast stations, including WNYC, New York City's own municipal radio outlet. When the OSS (Office of Strategic Services) was established in 1942, American war propaganda was also broadcast by the station through a lease agreement until 1947, with full independence of broadcasting content restored to the station in 1954. [5]

In 1960 the station was purchased by Metromedia, and in 1962 it was acquired by the International Educational Broadcasting Corp. (now Bonneville International), which was owned by the Church of Jesus Christ of Latter-Day Saints (the Mormons). Under this ownership, the station now billed itself as "Radio New York Worldwide," and moved its studios to New York City. Its format changed to adult contemporary, and newscasts originated from ABC Radio, CBS radio, and from sister station WRFM in New York. There were even rumors of partial control of the station by the Central Intelligence Agency, due to its heavily anti-Communist slant. In 1966, its call letters were changed to WNYW until that call was re-assigned to Fox Broadcasting (TV Channel 5 in New York) in 1974. [6]

The next station with a shortwave history was WBZ in Boston, which operated W1XK. The experimental call was first issued to Westinghouse as owner of WBZ and WBZA in June, 1930 on a temporary basis on the frequency of 990 kHz while the station was being moved from its Westinghouse factory in East Springfield to its new location in Millis, Massachusetts. The call was deleted once the new building was completed in February of 1931. [7] The date it was established as a shortwave station only is unknown, but this card from W1XK is dated 1935.



The Way We Were

The call of shortwave station W1XK only existed until August, 1939, when it was changed to WBOS. [8]

In 1924, the General Electric Co. began experimental shortwave broadcasting under the call 2XI in South Schenectady, New York, as a relay of broadcasts from the recently licensed medium wave AM station WGY. Shortly thereafter, the call 2XI was reassigned to RCA at Tuckerton, New Jersey for international telegraph communications on 3000 kHz, and its call changed to WGH. But in 1925, G.E. continued its experimental shortwave broadcasts under the call W2XAF, running 40 kilowatts. In 1926, a second shortwave station, W2XAD was established, running 25 kilowatts. Again, both stations relayed the medium wave broadcasts of WGY. The antenna system for these shortwave stations was a "fan" type center fed array consisting of 3/8 inch hemp rope, with copper wire wound over it. Later, additional programming was relayed from other sources, including foreign broadcasters. [9]

In 1933, an additional G.E. shortwave station came on the air under the call W2XAC, and in 1934, yet another station, W2XO came on the air as well, both paralleling programming from W2XAD, W2XAF, and WGY. In 1935, both stations used a unique "station ID," the sound of crashes of 10 Million Volts of artificial lightning, accompanied by their station logo, "The Voice of Electricity." By 1937, W2XAD and W2XAF received authorization to increase power to 100 kilowatts, beaming audiences in Europe, Central and South America, and the Pacific. A new "curtain" type antenna was constructed for this higher power, and the first transmission was made under the call W2XAF. But in September, 1939, the FCC ordered that all such experimental broadcasting stations exchange their experimental calls for regular "commercial" calls. In the 1930's, shortwave radio was still considered something "experimental," and that's why these stations were originally given experimental licenses. Consequently, W2XAD became WGEA and W2XAF became WGEO. A temporary call, WGEU was assigned, *{Note: presumably as a replacement for W2XAF}*, but shortly thereafter, the call was changed to WGEO. Later, during the Cold War years, these stations would become transmitters for the Voice of America. [10]

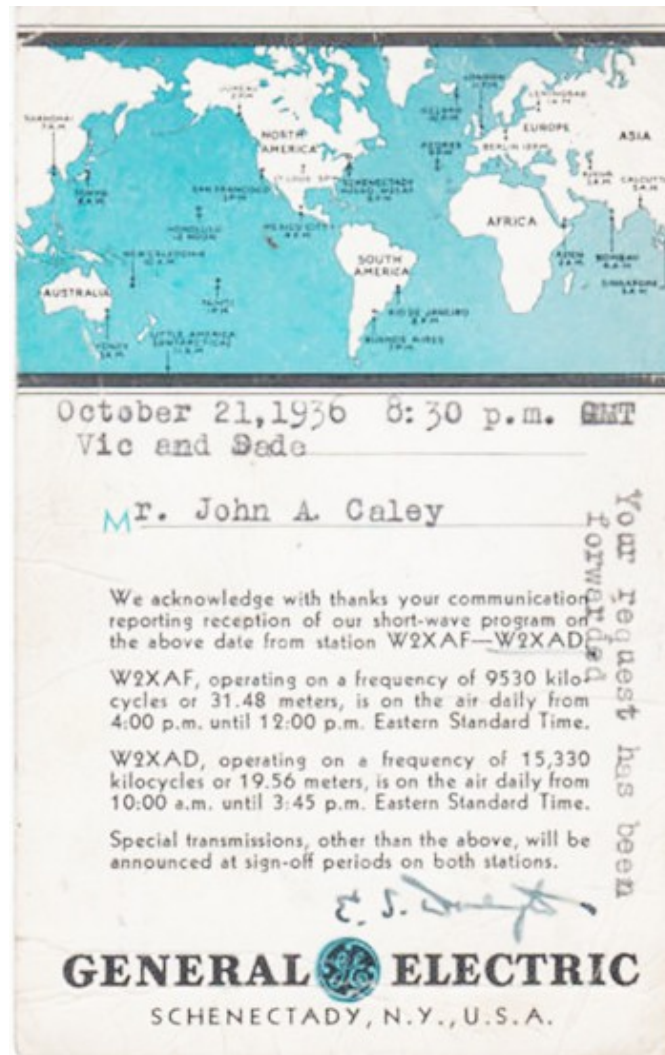
Below are some artifacts from W2XAD/W2XAF-WGEA/WGEO and their 100 kilowatt stations, a picture of their "Big Bertha" transmitter and a QSL from W2XAD/W2XAF in their heyday.



"Big Bertha," G.E.'s 100 kW shortwave transmitter at Schenectady, NY

Image: Radioworld.com

The Way We Were



In the 1920's, Alfred H. Grebe, a radio experimenter and manufacturer of radio receivers, established an experimental shortwave station with the call 2XE, later W2XE. This station first re-broadcast the programming of medium wave station WAHG, also licensed to Grebe. In 1926, he established the Atlantic Broadcasting Co., and changed the call of the medium wave station to WABC. Note that this should not be confused with the current WABC, which is owned by the American Broadcasting Co. The "original" WABC, owned by Grebe, was sold to the Columbia Broadcasting System (then known as the "Blue Network") in 1928. In 1947, the "Blue Network," was sold, and the call was changed to WCBS to avoid confusion, and ABC station WJZ changed call to WABC.

But in 1937, Columbia Broadcasting (then WABC, and now WCBS) established shortwave experimental station W2XE. It ran 10 kilowatts and was located in Wayne, New Jersey. [11]

The Way We Were

Here's their 1939 QSL, and although their mailing address is shown in New York City, it was actually located in Wayne; where exactly, is unknown.

International Station
W2XE
Owned and Operated by the
COLUMBIA BROADCASTING SYSTEM, INC.
485 MADISON AVENUE
New York City
U. S. A.

January 17, 1939

Dear Listener:

Thank you for your recent communication. This will verify your reception of International station W2XE on frequency No. 6 on October 30, 1938.

W2XE

1.	6120 Kc.,	49.02 M.
2.	6170 Kc.,	48.62 M.
3.	9660 Kc.,	31.09 M.
4.	11830 Kc.,	25.36 M.
5.	15270 Kc.,	19.646 M.
6.	21570 Kc.,	13.91 M.
7.	21570 Kc.,	13.91 M.

COLUMBIA BROADCASTING SYSTEM, INC.

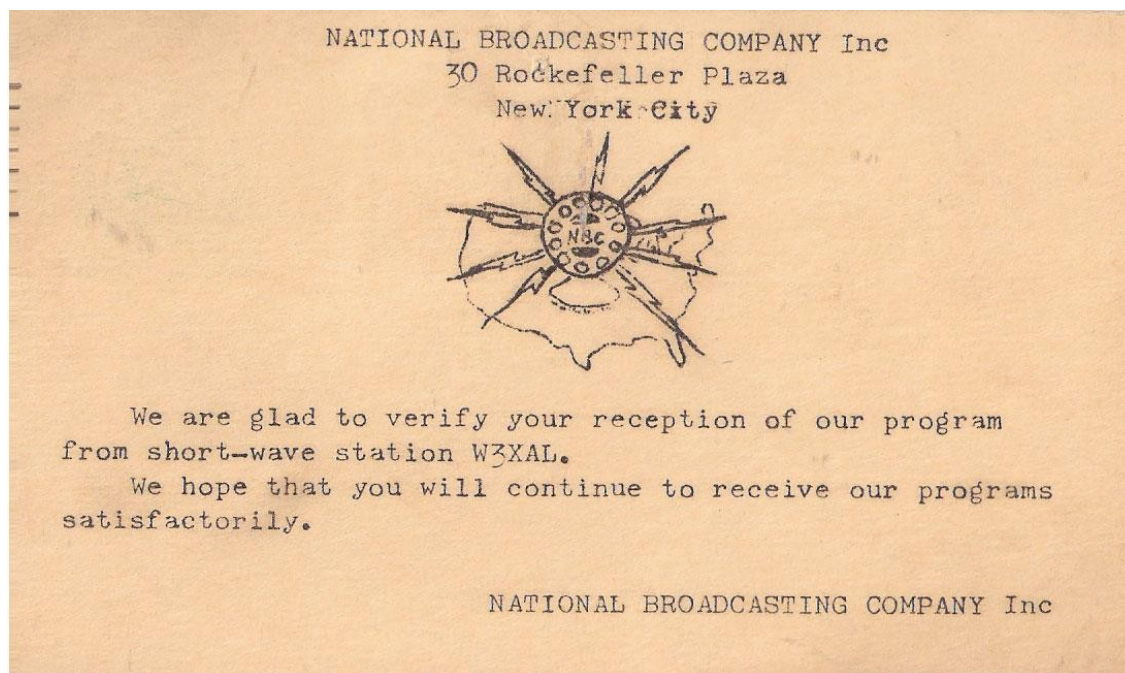
I-A. Tucher
International Station W2XE

Initially, W2XE and Philadelphia shortwave station W3XAU (shortwave outlet of WCAU), relayed programming from CBS-owned WABC. Later, they added foreign language broadcasts for international audiences. In 1939, with the elimination of experimental calls used by shortwave broadcasters, W2XE changed call to WCBX, and attempted international commercial broadcasting. But in 1941, with the advent of World War II, all international U.S.A. shortwave stations were taken over by the O.W.I (Office for War Information) for disseminating war propaganda to Europe and the Pacific. Although the transmitters were operated by their commercial owners, program content originated from OWI studios in New York, and station ownership reimbursed by the government for the use of their facilities. In 1940 and 1943, CBS established a new shortwave transmitter at Brentwood, Long Island, with the calls WOOC and WOOW; and in 1944, another station in Delano, California. [12]

During the Cold War years, all three of these stations became transmitters for the Voice of America. The Wayne station was licensed as WDSI, until closed sometime around 1960, and the call transferred to Brentwood, Long Island. The Delano station became KCBR, after being earlier assigned to the Armed Forces Network in the early 1950s. These stations featured a musical identifier as part of their station ID. It was a few bars of "Columbia the Gem of the Ocean." I heard these stations and their distinctive ID many times as a young SWL in the 1950s.

The Way We Were

Which takes us to yet another future V.O.A. station, W3XAL, licensed to the National Broadcasting Co.



Although its address on the QSL above is the mailing address for the N.B.C. flagship station WEF (later WRCA and WNBC), it was located in Bound Brook, New Jersey. [13] This transmitter was first installed in 1930 by RCA and added to the site of medium wave broadcaster WJZ (known today as WABC). [14] In 1931, RCA added W3XL to this site. Both stations simulcast the programming of WJZ. [15] Note that the call was a W3, based on pre-World War II call areas for amateur and experimental stations. In those days, Bound Brook, in Somerset County, was in "W3" land.

By 1933, W3XAL upped their power to 25 kilowatts, and was now officially part of the N.B.C. "Red Network." As part of this change, their other Bound Brook station, W3XL now ran 20 kilowatts. [16] The antenna system at these stations was described in 1938 as being "four directive beam aerials and two non-directive aerials covering an area of 24 acres" for coverage into Europe, Central and South America. [17] In September 1939, W3XAL and W3XL dropped their experimental calls and became WNBI, then WRCA. WRCA was transferred to their medium wave station in the 1950s, and the medium wave call later changed to WNBC.

Finally, in the 1950s, the site became WBOU, the Bound Brook transmitter for the V.O.A. This was the first station I ever heard on shortwave after building my first receiver in 1957. According to one source, it was closed down in 1965, and today nothing remains on the site except possibly some concrete pylons where the towers once stood. [18] [43]

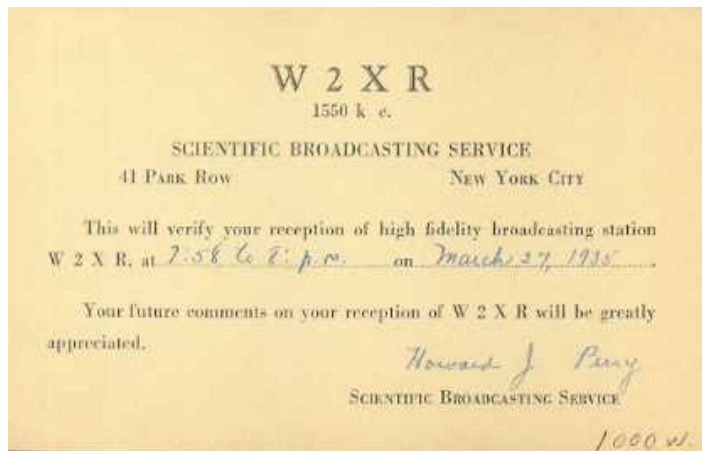
Television was a new frontier in the 1920s, and among its early experimenters was John V.L. Hogan, a former protégé of Lee De Forest. Hogan set up such a station transmitting "mechanical" TV images from a small laboratory over a garage with a rooftop antenna in Astoria, a section of Long Island City, New York. Hogan operated under the name Radio Pictures, Inc., with the call W2XR. The station sent television and facsimile images on 2100 to 2200 kHz. [19]

The Way We Were

In 1933, the Federal Radio Commission (predecessor of the FCC), authorized wide-band AM broadcasting on 1530, 1550, and 1570 kHz. Hogan began to accompany his television images with classical music on 1550 kHz, and although there was little interest in the images, the music was appreciated by his audience. Hogan soon abandoned his television experiments and concentrated on broadcasting high fidelity music by transcription. [20]

Hogan's original 1929 television transmitter ran only 50 Watts, but by 1934, and his change to high fidelity audio, this was replaced by a new 250 Watt transmitter. [21]

Here's a QSL from W2XR dated 1935, when the station was still non-commercial.



Note that by this time, the station was identified as being operated by the Scientific Broadcasting Service, and that the power had increased again to 1,000 Watts. It had also moved to Park Row in lower Manhattan. From here, it was a short step to becoming a fully commercial enterprise, and in 1936 the call letters were changed (by request, apparently) to WQXR, because the "Q" sounded similar to the previous "2" in the call. [22]

The audio was high fidelity, but still subject to the relatively high noise level on the medium wave AM broadcast band. In 1939, a special wideband telephone line was leased from their studios to Edwin Armstrong's new FM station at Alpine, New Jersey. It was the world's first regularly scheduled FM broadcast on July 18th of that year. By November, Armstrong lent WQXR its first FM transmitter, which operated under the call W2XQR. When FM became commercial in 1941, WQXR licensed its FM transmitter as W59NY, the "59" signifying the channel number of the original FM band, which ran between 42 and 50 Megahertz. Later, in 1943, when these channel designators were no longer used, the FM call was changed to WQXQ. Finally, in 1948, the FM call was changed again to WQXR-FM. [23]

On a personal note, more than 50 years ago I was rummaging around in a second hand bookstore in Passaic, New Jersey, where I found a pile of old QST magazines from 1947. They were cheap; I think 35 cents apiece, so I bought the whole pile. When I got them home and started reading them, there was a rubber stamped message on the first page. It read: "PROPERTY OF JOHN V.L. HOGAN, NEW YORK CITY." I don't know why or how those magazines ended up in Passaic, New Jersey, or whatever happened to them. I don't seem to have them anymore!

The Way We Were

Another early television pioneer was Charles Francis Jenkins. For many years, Jenkins was credited as being the first to broadcast television signals, but that claim has been disputed. He was, however, most probably the first to broadcast television on a regular, scheduled basis, under the name Charles Jenkins Laboratories. His station, W3XK, began operation in 1928, first in Washington, D.C., and later Wheaton, Maryland. Originally, transmissions were on 1605 kHz, then 6420 kHz, and finally in the 2000 to 2100 kHz range. [24]



Jenkins' Transmitter in 1929
Image: Early Television Museum

Jenkins was one of the original members and first president of the Society of Motion Picture and Television Engineers (SMPTE). An unidentified newspaper article (possibly the *Baltimore News*) announced an upcoming television broadcast on W3XK as including "old-time well-known radio entertainer" Jack Ottenheimer and his "musical friends." [25] I confess that I am unfamiliar with this particular Ottenheimer.

The Way We Were

Here's a W3XK QSL, though, from 1931.

JENKINS STATION W3XK
JENKINS LABORATORIES
1519 CONNECTICUT AVE. WASHINGTON, D. C.

Date Jan. 26, 1931

FELLOW LOOKER-IN:
We thank you for your report on W3XK's signals ☒
We thank you for the report on W3XK'S signals and pictures ☒
We have mailed you our latest literature ☐
We hope that you will be looking in on our pictures soon ☐

METHOD OF ANALYZING
48 lines to the picture; 15 picture frames per second (900 R. P. M. of disc receivers); and scanned left to right and top to bottom in continuous sequence, i. e., standards adopted by the Engineers Committee of the Radio Manufacturers' Association.

FREQUENCY 2,050 Kc. or 146 meters 2,900 Kc. or 103.4 meters <u>2065 Kc -</u>	POWER INPUT <u>5000 watts</u> 5000 watts	TIME OF BROADCASTS 8 to 10 P. M., E. S. T., every evening, except Sundays and holidays.
--	---	---

The frequency in use was 2065 kHz, and the power input is listed as 5,000 Watts. The card does not confirm reception of a television image, however; apparently only voice and possibly music were received.

Jenkins' television company evidently fell on hard times, and was liquidated in 1932, just one year after this QSL was sent. Lee De Forest's Radio Corporation acquired its assets, but within months, De Forest's company went bankrupt. The remaining assets were in turn purchased by RCA, and all further work involving mechanical television by them was ended. [26] They had bigger plans.

One interesting additional fact about Jenkins' television station is that he can also be credited with airing the first television commercial. For this unprecedented act, he was fined (by the Federal Radio Commission). [27] If only that position had been maintained to this day, television might be a more tolerable medium!

Research efforts have not yet disclosed exactly when shortwave station W4XB first came on the air, but its earliest reference is in the government's list of stations dated March 31, 1932. [28] This station was operated by the Isle of Dreams Broadcasting Corp. located on Collins Island, Miami Beach, Florida. It was the shortwave outlet of standard AM broadcaster WIOD (W + Isle of Dreams).

Here's a QSL from W4XB dated October, 1935.

W4XB's Transmitter Is Located on Collins Island, a Small Island Situated in Biscayne Bay

Thank you for your report of 10/30/35 on reception of W4XB. We are glad to verify this report.

By M. C. Scott
We sincerely hope that you will be a regular listener to W4XB and that we may have the pleasure of further reports from you.

In the same building housing W4XB are also located the 1,000-watt transmitter of broadcast station WIOD, the 100-watt transmitter on 120 meters serving the Miami Police Department and the 15-watt transmitter on 8 meters which serves the Police Department of Miami Beach.

6040 KC or 49.67 Meters

W4XB operates on a power of 250 to 2,500 watts and is an experimental relay broadcast station operated in conjunction with broadcast station WIOD.

Owned and Operated by Isle of Dreams Broadcasting Corp.
Transmitter Collins Island, Miami Beach, Fla. Studios News Tower, etc.
Transmitter Collins Island, Miami Beach, Fla. Studios News Tower, Miami, Fla.

The Way We Were

The card tells us a little more about them, though. They operated on 6040 kHz with a power of “250 to 2,500 Watts,” sharing the building with WIOD, and serving as a shortwave relay station for them. The card also states that WIOD ran 1,000 Watts, with a special 100 Watt transmitter on 120 meters (approximately 2500 kHz) serving the Miami Police Department, and another 15 Watt transmitter serving the Police Department of Miami Beach.

W4XB ceased to exist in 1939, following a government ruling that required international shortwave broadcasters to be competitive, power-wise, with stations operated by Axis nations, as well as other domestic shortwave broadcasters, in order to insure that their signals would be received well in foreign countries targeted for coverage. Shortwave stations were ordered to comply by July 1941, with additional requirements that all such stations operate with directional antennas and a minimum power of 50 kilowatts. At the same time, these stations would be permitted to become commercial stations, and that programming would have to promote the “culture of this country and which will promote international goodwill, understanding and cooperation.” [29]

The expected opposition to this action came from the broadcasting industry, the press, and the American Civil Liberties Union, with fears expressed of censorship and free speech issues, as well as fears of possible government control of all domestic broadcasting. The government claimed that its intentions were “benign,” and later, the requirements were softened, and then ultimately dropped entirely. [30] Nevertheless, a station like W4XB, with only limited power and resources, became one of a number of casualties as a result of this proposal.

The standard AM station, WIOD, which began broadcasting in 1925, continues in service today on 610 kHz, with an all-news and talk format, and a power of 5,000 Watts. They also are permitted, under an STA (Special Temporary Authority), to increase power to 10,000 Watts in order to overcome deliberate interference from a Cuban station. [31]

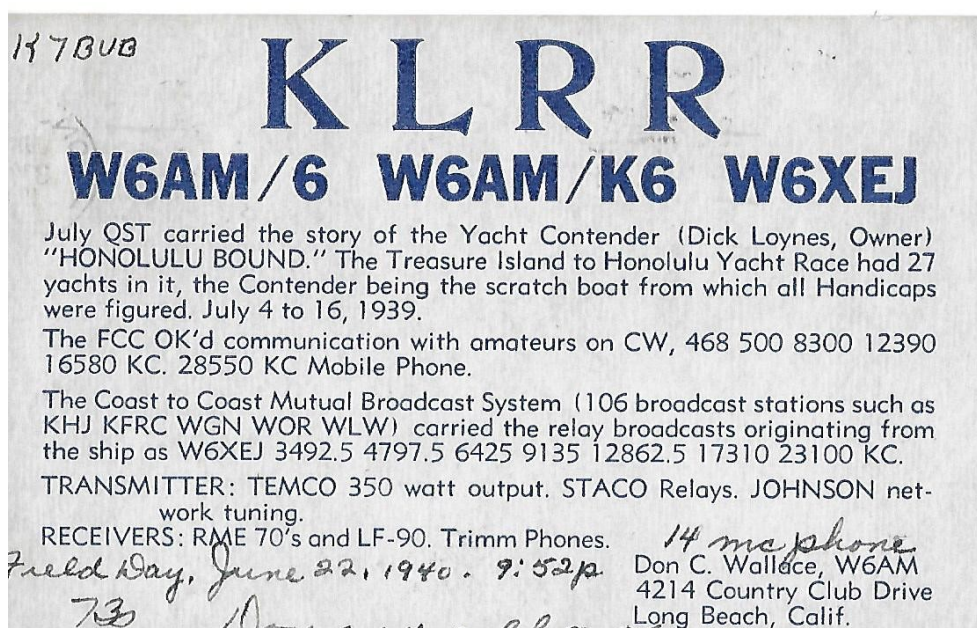
Here’s another station that started out as a conventional shortwave broadcast outlet, and then ended life as a propaganda station. In 1939, the New York World’s Fair was a major event on the East Coast, but at the same time, a man-made island had been constructed in San Francisco Bay, known as Treasure Island. On that island, General Electric built station W6XBE, primarily as a feature of the Golden Gate Exhibition. The station originally ran 20 kilowatts, and operated on 9530 and 15330 kilohertz. [32] It is believed that W6XBE is the only known station to be built on a man-made island. [33]

In the meantime, as has previously been mentioned in this article, the F.C.C. had changed its rules regarding call signs of shortwave broadcast stations. The change required these stations to no longer use their experimental call signs. Instead, their calls would be changed to the usual, 4-letter calls issued to standard, medium wave broadcast stations.

So, even while the Golden Gate Exhibition was underway, the call W6XBE was changed to KGEI.

The Way We Were

Here's an oddity. Well-known amateur radio DX'er Don Wallace, W6AM, also once operated a shortwave broadcast station of sorts. Its call was W6XEJ. This station was set-up on the yacht "Honolulu Bound," which participated in a yacht race that ran from Treasure Island, California, to Honolulu in 1939. As stated on Don's QSL card, more than 100 standard broadcast stations carried reports from the yacht on the Mutual Broadcasting Network. The transmitter was built by Temco, a well known high-end custom transmitter manufacturer, running 350 Watts. Here's the special QSL Don had printed for this effort.



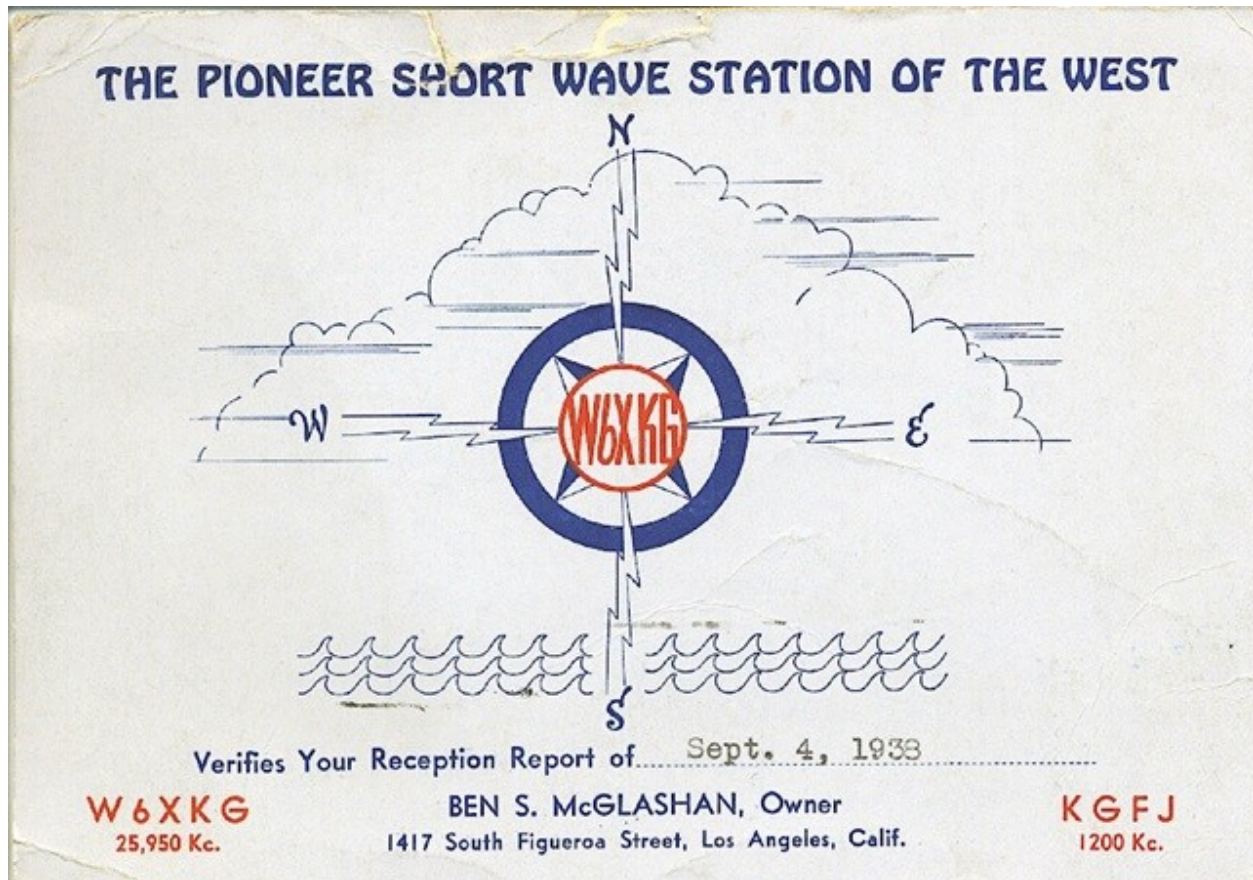
The call KLRR wasn't for broadcasting, it was the yacht's regular call for ship to shore communications. It has since been re-assigned to an FM station in Oregon. [35]

[Editor's note: Notice that the card is dated "Field Day, June 22, 1940" ... which probably WAS the official ARRL Field Day, as we still know it today!]

— Continued on next page —

The Way We Were

Now we come to one of the most interesting examples of an (experimental) shortwave broadcasting station operating in the 1930s. It operated on a frequency of 25950 kilohertz, on what were then termed in those days, “ultra high frequencies.” This frequency falls in the 11 Meter band, and although many of the stations operating there in those days used FM, not all did, and no further information can be found as to what their modulation type was, so we assume that it was AM. We know only that their power was 1000 Watts in 1939. [36] The station was W6XKG, located in Los Angeles, California. It was the shortwave outlet of standard medium wave station KGFJ, which operated on 1200 kilohertz, per their QSL card dated September 4, 1938.



An earlier, letter-type QSL confirmation of signals from W6XKG dated May 4, 1937, states that the power was then 100 Watts, and describes the transmitter as a “composite job,” and the antenna as “two quarter wave verticals two wavelengths above ground with transposed feeders.” This means that the transmission line was open-wire, balanced line, transposed at intervals. [37]

This technique is used in radio on open wire transmission lines to maintain impedance balance along the length of the line. In telephone systems employing open wire lines, it was done to reduce crosstalk, and in electric power transmission, where 3-wire lines are customary, it is used to maintain impedance balance and to reduce mutual interaction between lines. [38]

The Way We Were

In 1939, the results of a research study conducted by the National Bureau of Standards were published which contained the results of experiments made to determine the M.U.F. (Maximum Usable Frequency) of the high frequency (shortwave) bands. The study involved monitoring a station operating at a high enough frequency to suggest that useful data could be obtained. The station they chose for this study was W6XKG. The resulting published paper included a series of graphs plotting various factors influencing the M.U.F., and a separate graph plotting the signal strength of W6XKG in microvolts over a number of hours of the day as received at N.B.S. headquarters in Washington, D.C. Their conclusions suggested that from the data obtained, useful predictions could be made about the M.U.F., as well as predictions about the sunspot cycle.[39]

Despite the data obtained by the N.B.S. from these observations, when Ben McGlashan, licensee of station W6XKG (and W6XRE) applied for renewal of licenses, the F.C.C. challenged the applications, charging that there was insufficient technical data provided by the licensee. The F.C.C. action stated that the measurements taken by the licensee to determine the station's ability to overcome ignition noise on their frequencies fell short of claims. In a "listening" test, only a receiver with loudspeaker was used to determine readability, a method unacceptable to the F.C.C., because the "measurements" made could not be correlated and verified by measurements made by other parties, and for which no supporting data was supplied. [40]

In addition, the F.C.C. noted that there were complaints received from station W9XUP, St. Paul., Minnesota, reporting interference from W6XKG while these tests were being conducted, with further collaborating reports from Middle West and Eastern states, as well as reports from Europe, Australia, and Canada. Also, despite filings from W6XKG that additional tests would be performed to prove the effectiveness of their station in overcoming noise sources, no supporting data was supplied. In consideration of all these factors, the F.C.C. consequently denied renewal of McGlashan's licenses, effective September 24, 1940. [41]

McGlashan's standard AM station KGFJ continued, however, to exist for many years. The station is distinguished in one way, though. It appears to be the first 24 hour radio station in the United States, having started its round-the-clock broadcasting in 1928. Despite its ambitious experiments on shortwave, however, it remained on AM, never having established an FM outlet. After several call letter changes, the station survives as KYPK, a Korean language broadcaster. [42]

Next month, we will continue this study of early "experimental" shortwave broadcasters, and what became of them.

Until next month,

73,

Fred W2AAB

See NOTES on following pages.

The Way We Were

NOTES

- [1] Article: "WNYW (shortwave)" *Wikipedia*
- [2] Ibid
- [3] Buxton, William J., Correspondence dated January 1, 2009 at: <https://www.issue-lab.org/resource/rockefeller-family-support-for-w1xalwrul-boston-vest-pocket-bbc.html>
- [4] "The Eastern Massachusetts Radio Timeline: the 1930s," at: bostonradio.org/timeline-30s
- [5] Op Cit., Note 1
- [6] Ibid.
- [7] Op Cit., Note 4
- [8] Ibid.
- [9] Peterson, Dr. Adrian M., "Schenectady on Shortwave – Pt. 2 – The Voice of Electricity," *Wavescan*, August 26, 2012, at: <http://www.ontheshortwaves.com/Wavescan/wavescan120826.html>
- [10] Ibid.
- [11] Schneider, John, "When CBS Got Serious About Shortwave," *RadioWorld*, March 7, 2014, at: <https://www.radioworld.com/news-and-business/when-cbs-got-serious-about-shortwave>
- [12] Ibid.
- [13] *F.C.C. Reports*, April 17, 1939, pp. 270, 271, at: https://books.google.com/books?id=iIERAQAAAJ&pg=PA272&lpg=PA272&dq=W3XAL&source=bl&ots=LOjpaEIXWP&sig=ACfU3U2jnTOXpMOcXkf4G5nwyTxEldeoyA&hl=en&sa=X&ved=2ahUKEwHjx_HT3MzoAhUTmHIEHcoaCmYQ6AEwA3oECAoQLg#v=onepage&q=W3XAL&f=false
- [14] Berg, Jerry S., *The Early Shortwave Stations: A Broadcasting History Through 1945*, p. 76
- [15] Ibid, p. 83
- [16] Ibid, p. 95
- [17] "Here and There on the Air," *St. Louis Post-Dispatch*, St. Louis, Missouri, Sunday, 24 April, 1938, at: <https://www.newspapers.com/clip/19442029/testing-at-empire-state/>
- [18] Post by K2PG on amfone.net, at: <http://amfone.net/Amforum/index.php?topic=27935.15;wap2>
- [19] "Early Television Stations – W2XR Long Island City, NY," *Early Television Museum*, at: <https://www.earlytelevision.org/w2xr.html>
- [20] Ibid.
- [21] "WQXR: A Call Letter Primer," *NPR Archives and Preservation*, at: <https://www.wnyc.org/story/wqxrs-alphabet-soup/>
- [22] Ibid.
- [23] Ibid.
- [24] "Early Television Stations – W3XK Washington, D.C.," *Early Television Museum*, at: <https://www.earlytelevision.org/w3xk.html>
- [25] Ibid.
- [26] Ibid.
- [27] The Center for the Study of Technology and Society, quoted by Tony Long in the article, "July 2, 1928: America's First TV Station Goes on the Air," *Wired*, July 2, 1987, at: <https://www.wired.com/2007/07/dayintech-0702-2/>
- [28] U.S. Department of Commerce, Radio Service Division, *Radio Service Bulletin*, Washington, March 31, 1932, No. 180.

More NOTES on next page.

The Way We Were

[29] Op. Cit., Note [14]

[30] Ibid.

[31] *Wikipedia* article, "WIOD," at: <https://en.wikipedia.org/wiki/WIOD>

[32] Schneider, John, "W6XBE at the Golden Gate Exposition, 1939," *Radio World*, January 11, 2011, at: <https://www.radioworld.com/columns-and-views/w6xbe-at-the-golden-gate-exposition-1939>

[33] Fritz, John, "W6XBE," *Arcane Radio Trivia*, June 30, 2009, at: <https://tenwatts.blogspot.com/2009/06/w6xbe.html>

[34] Ibid.

[35] *Wikipedia* article: "KLRR" at: <https://en.wikipedia.org/wiki/KLRR>

[36] "Early FM Radio in the U.S. – Stations Authorized by the F.C.C. As of January 1, 1939, as Noted in Broadcasting Yearbook, 1939," at: <https://www.olderadio.com/archives/dial/1939fm.htm>

[37] QSL Letter, "Apex Band Stations," *On the Short Waves*, at: [http://www.ontheshortwaves.com/American States QSLs/American States on Shortwave-QSLs.html](http://www.ontheshortwaves.com/American%20States%20QSLs/American%20States%20on%20Shortwave-QSLs.html)

[38] *Wikipedia* article, "Transposition (communications)," at: [https://en.wikipedia.org/wiki/Transposition_\(telecommunications\)](https://en.wikipedia.org/wiki/Transposition_(telecommunications))

[39] Smith, Newbern, et al., "Application of Graphs of Maximum Usable Frequency to Communication Problems," Research Paper RP1167, *Journal of Research of the National Bureau of Standards*, Vol. 22, January, 1939, at: <https://books.google.com/books?id=zdd8fkk3-l8C&pg=PA213&lpg=PA213&dq=W6XKG&source=bl&ots=5ZBptKlT6&sig=ACfU3U1MI6ljsZbM72W3MpWy54HpU1FRbw&hl=en&sa=X&ved=2ahUKEwjy1tjPptToAhVXI3IEHaPSC6MQ6AEwAXoECAsQLw#v=onepage&q=W6XKG&f=false>

[40] Ibid.

[41] Ibid.

[42] *Wikipedia* article, "KYPA," at: <https://en.wikipedia.org/wiki/KYPA>

[43] W2JC says: I have a very personal connection to that paragraph! In the spring of 1959 I was a freshman at Rutgers - New Brunswick and on weekends I would hop on my 10-speed bike and ride around the area. One weekend I was out riding, found myself in Bound Brook (which I knew nothing about) and suddenly I could see monster antennas ... naturally, I followed my nose to them, found a long gravel road which I followed innocently, at the end of which was a brick building beneath those humongous antenna and towers! It said VOA over the only door to the building.

Being the naïve 18 year old that I was, I just knocked on the door! Finally it opened, a man came out - looked around -- asked who (the hell) I was and looked a bit nervous. I just said I was a HAM, had been riding around the area and found this exciting place! He again looked around nervously, said "I'm not supposed to do this, but 'cmon in."

I got the tour of the station, and it happened to be the end of an hour at which time he had to change one of the big transmitters from one band to another -- so he opened the cage and we both went INSIDE the transmitter ... where he dismounted a giant vacuum capacitor, replaced it with a different one, and we went out to re-tune the transmitter!

And you know what? As I type this, I can (and am) picture the entire episode "clear as day."

We appreciate your support of the Fair Lawn Amateur Radio Club!

This is your Club! Be part of it!

B&W to the latest 4K HDTV Signals and Antennas

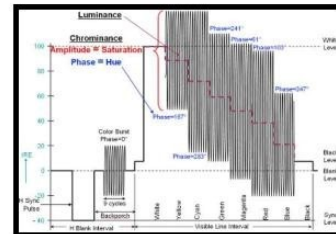
Robert Holstrom - KD2BKD – 3/16/2020

Back in the day everyone received OTA (Over The Air) TV reception with either rabbit ear, loop, or log periodic antenna typically on the chimney of their home. Back then it was channels 2 to 6 for VHF-Lo (54MHz – 88MHz), 7 to 13 for VHF-Hi (174MHz – 216MHz) and 14 to 84 for UHF (470MHz – 890MHz).

Now today you can still receive OTA TV. Things have changed, but not as much as you think with regards to the antennas.



Going back in time many may remember their 1st color TV in the 1960s. This was an exciting time for many. The old black and white sets also worked with the same broadcast. The way that color was introduced in the NTSC signal was together with the original luminance signal that was used to receive black and white. The color or



chrominance signal was encoded using a subcarrier frequency to produce two color difference components. The third color was produced by taking the luminance from the B&W signal and subtracting the other two colors. But that was many years ago before HDTV took over. They no longer broadcast this type of signal.

Now with the interception of HDTV they started from scratch and designed the ATSC 1.0 system. Those old NTSC TVs required a converter boxes to receive OTA HDTV. Some frequencies were also taken for other uses, even before HDTV. Channel 37 was never used to prevent radio astronomy interference. In 1983 channels 70 – 83 were reassigned for land mobile radio systems used by public safety. With HDTV in 2009 channels 52 – 69 were reassigned for 700MHz cell phone usage. In 2011 channel 51 was removed to prevent interference with the 700MHz band. Now the UHF channels are 14-36 and 38 – 50. Also, in the HDTV ATSC system those transmitting Low VHF, channels 2 – 6, were limited to 20kW or 80% of what they were transmitting before. Most of these channels were virtually allocated to UHF channels at up to 1000kW. Today you may get channels 2, 4, and 5 on your HDTV but they are not coming in on the frequencies they once did. Only old channel allocation 7 to 50 are used.



Now many companies have what they call “HDTV” antennas which are smaller than the old TV antennas typically found on chimney mounts. These “HDTV” antennas are designed to be able to only receive channels 7 to 50 which are the ones HDTV use today. FYI, all the old antennas will work just as well as they did before if they received channels 7 to 50.



About 4K OTA HDTV, it is not available in large markets yet. Testing is being done in Phoenix, Dallas, Baltimore, East Lansing, Raleigh, and Santa Barbara. It is said that 60+ TV markets will be broadcasting 4K HDTV by the end of 2020. Some features of the new 4K HDTV, ATSC 3.0 are 4K video with frame rates up to 120Hz. ATSC 3.0 will also be able to send information back on what you are watching to sell to advertisers. It is voluntary if stations want to switch to this

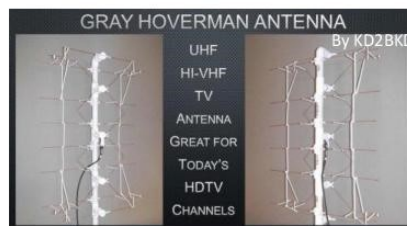
new system. If they do switch, they will be required to still broadcast the current ATSC 1.0 system for 5 years. It is not backward compatible to the current ATSC 1.0 system and will require a new TV or special converter box. Any TV antenna that receive TV today will also receive 4K HDTV.



I personally have made a TV antenna designed back in the 1960s called Gray-Hoverman, named after the designers, US patents #2918672 & #3148371. Radio



Shack used to sell a similar antenna. This antenna is about 3ft high and 2 ft wide. Original GH antenna was for channels 14 to 35. With some minor additions and alterations, the antenna works for channels 7 to 50 very well. The design is now in the public domain and not available for sale. These antennas can be put into 1x2 and 2x2 configurations for more gain. The GA antennas are very popular in Canada.



More information is available at: <https://www.digitalhome.ca/ota/superantenna/>

Now if anyone gets OTA HDTV you need to remember to scan the HDTV tuner at times as new channels maybe found and others may be moved either virtually or by actual frequency. Each channel can also have multiple programming on it. They typically go by a system like, 2.1, 2.2, 4.1, 4.2, 5.1, 5.2, 7.1, 7.2, 7.3, etc...

Who Made It?

By: Fred Belghaus W2AAB

I saw the following QSL card on eBay, and was intrigued by the equipment used by this Japanese ham. Having only a theory about the manufacturers, I sent an email to my good friend Pete, W2PM, another amateur interested in ham radio history, to see whether he might be able to identify them definitively. Pete couldn't add to my guesses, though. Then, without my knowing it, Pete bought the card and sent it to me.



Notice the straight key on the operating table. Although it isn't identified, I would wager that it was made by Hi-Mound, the best known maker of keys in Japan, then and now. The old fashioned horn speaker is a nice touch, too! At extreme right is a VFO, probably made by the same company as the transmitter. On top of the VFO is a tube type VHF receiving converter. Most likely, it was for 6 meters, which was always a popular band in Japan. The insignia that looks like the ARRL insignia is that of the Japan Amateur Radio League.

Are there any experts in foreign ham equipment manufacturers out there? If you can identify the transmitter and receiver shown on the card — you are *good*.

At first sight, I thought the transmitter (top unit) was made by Trio (later known as Kenwood). I was wrong.

I thought the receiver (below the transmitter) looked like a hybrid version of the Hallicrafters SX-100 and the National NC-183D, both popular American receivers used in those days, and possibly a homebrew effort based on those two popular American models. Again, I was wrong.

Who Made It? continued.

Here are some hints (but not too many):

- The card is dated 1963
- The receiver manufacturer is Japanese, but not well-known in this country, except possibly by those on the West Coast, or by collectors of foreign amateur equipment.
- The transmitter, however, is a product of one of the best-known companies now producing a large variety of HF, VHF and UHF transceivers.

Only one answer allowed for each. Anyone correctly identifying both the transmitter and receiver I will treat to two free slices of pizza at Ray's (when we can go there again). If only one correct answer, one free slice. (This is for fun, anyway)!

Answers next month.

73,

Fred W2AAB

— • • • • —

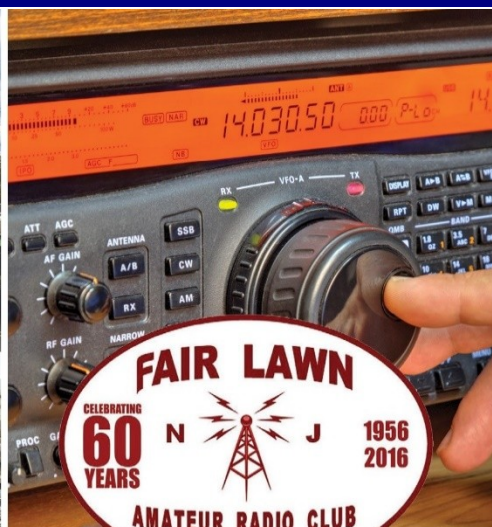
What Have You Been Doing During Month 1 Of The Covid-19 Lockdown?

I've asked a random selection of club members what they have been up to radio-wise while waiting out the coronavirus. Here's what we've learned...more next month (but we hope to be free soon).

Stan K3KKH: Fun With Ferrites

I have been updating an Excel workbook with complex permeability data that I downloaded from the Fair-Rite Products Corp, and currently have data on type 31, 43, 51, and 52 ferrites. I use the workbook for design analysis of coils and toroidal transformers. The workbook includes macros for calculating inductance, inductive reactance, equivalent series resistance (due to core loss), for one or more stacked cores; and wire resistance due to the skin effect for any AWG wire size and length. Additional macros calculate wire length for a given number of turns and wire size (AWG); and the maximum number of single layer turns on a toroid core, and the corresponding wire length.

In concert with the above, I have started to develop a set of equations [Excel macros] that describe the performance of a toroidal transformer. The set will include equations for input impedance, voltage transfer function, and insertion loss.



FLARC Proof Of Performance

Why is FLARC New Jersey's most exciting radio club?

Here are just a few reasons so far in 2019:

- Field Day at Memorial Park
- Winter Field Day
- World Amateur Radio Day special event
- Earth Day At Great Falls special event station
- Garretson House special event station
- Memorial Day parade public event
- Portable Day(s) with BARA
- Fair Lawn Street Fair(s) public event
- Independence Day Fireworks public event
- Vintage Night
- "Kids Day" public event with TCRA
- North American QSO Party
- NJ QSO Party
- Foxhunts
- Summer VANFEST at W2DLT
- Field Trip to iHeart Radio

Plus:

- Thursday Night open house and CW class
- Soldering classes
- RACES/ARES public service
- Monthly w sessions
- Projects such as end fed and 2m antennas
- Annual member interest survey
- Weekly Monday "Near and Far" Net
- FLARC auction
- FLARC Holiday Party free to members

Plus:

- Over 45 consecutive months of speaker programs including K1JT in 2019!
- New equipment in the shack!
- New antennas on the roof!
- Coming Soon: Tuesday evening and Saturday morning club openings
- And...a clubhouse!!

That's why FLARC is the best club around!!
Join us with more activities, speakers and projects to come!

There's A Hole In My Truck!!

J. Gordon Beattie W2TTT

Many of us have the desire to put electronics in our vehicles and simply have them run all the time. We put in extra “house” batteries and hope that they are big enough for the task of running the electronics without the engine idling. Others have concerns about their car battery, especially now with travel restrictions, because the “vampire current” requirements of the vehicle could leave the battery drained.

Additional devices such as GPSs, media servers, APRS trackers, mesh nodes, cellular wireless modems and routers, and even camera and alarm security systems can all require power to keep things going, even when the engine is off, and the vehicle is parked. My Big Electronic Red Truck or “BERT” is an extreme example of such requirements with its AREDN “Mesh” nodes, cellular modems, network switches, small servers, APRS devices, lights, a bunch of radios and a few security devices. Then there are other radios, computers and televisions that get turned on when the vehicle is parked. All these can add quite a load to the battery systems in the vehicle.

With all this combined load – even for two 6V, 220 AH golf cart batteries that form the heart of the “house” or backup battery bank – we can find the batteries depleted in a day or so. A simple solution is to run a thin extension cord through the back door and to plug into a GFCI outlet on the side of the house, or to use a generator when out in the field. This is fine to a point, but does create a trip hazard, both inside and outside, and is something else to manage when inside the truck. Another consideration is that the cord connection could become an electrical shock hazard in the rain and in puddles. Besides it looks so tacky and unpolished to see a cable junction in the dirt, mud and water! Something better had to be done.

The solution involved thought... a lot of thought... then an idea for a BIG 1-3/8 inch hole... followed by a LOT MORE thought... and a LOT of YouTube videos. Now these videos were mostly products of van to camper builds. There are a LOT of such videos out there, along with thousands upon thousands of viewer comments, articles and blogs. It's great to live in these times where you can readily see so many approaches to the problem of getting AC mains power into a truck or camper, while reading at all hours of the day or night, no matter where you are. I can honestly say, that other than Church, there have been no places where I haven't watched YouTube “how-to” videos.

So what options did I find? Well, there were 50A RV connectors, 30A RV connectors, there were household dryer outlets, some with “Jesus cables,” and even some that simply hacked out a neat access hatch and ran cables through it. In addition to these options, there were some clever folks who mounted a male 115VAC, 15A AC power inlet connector for an extension cord into the bumper to blend the connector's appearance into the plastic of the bumper. This was an attractive option to me, as 15A is generally enough to run all our electronics, plus a 1,200W heater or a couple of box fans depending on the season. In the future, we do have a separate plan to wire the truck with a 30A or 50A camping-style connector for those situations where we have a big generator or campground connection available. We also have an immediate plan to implement some solar power capacity on the truck.

What didn't work for me was the connector's placement on the bumper, as any low spot would naturally have the power extension cable on the driveway or on the ground. This just didn't sit well with me. While having the electrical connections for the trailer hitch installed, I noted that there were easily accessible plastic panels on the inside of the truck -- behind and extending above the tail lights. BINGO! I had my spot for the power inlet and a way to run the cable overhead from the side of my house when parked. I was very happy!

There's A Hole In My Truck!!

So after checking and checking again, and then again where the hole would go, I went onto AMAZON (Everyone's favorite Wuhan Virus-driven shopping option these days!) to get the parts needed to make this project work. There, I found a nice three-pronged, 115VAC, 15A AC power inlet bulkhead connector. In fact, I found it with water-resistant covers, with or without a 20 inch outlet pigtail for the inside connection, and in black or white for prices between \$17 and \$22! Isn't shopping online in the 21st Century very cool!

So I bought the black one with the pigtail. The online listing clearly showed the dimensions: 1-3/8 inches! So that was the start of another search. This time for a decent hole saw, which then became a study of hole saw sets, with MORE YouTube videos, online comments, reviews and blogs! I settled on the DeWalt Electricians Hole Saw Set because they were a solid product, with a slug ejector, a nice case and a great price! You might ask, "What is a slug ejector?" It is a HUGE help when after using your hole saw, it provides a spring-loaded mechanism to remove the waste material, or "slug" from the hole saw. Without it, you can find yourself sticking in screwdrivers into the side holes like you were sticking pins into a voodoo doll, except that you can find yourself prying and manhandling the slug out of the saw, cutting your fingers, and saying words that got you a chew on a bar of soap when you were a kid! Great feature that slug ejector!

A couple of other things came in handy for the project including an electric drill with a half inch chuck, some small drill bits for the pilot hole to guide the hole saw mandrel bit, and also to pre-drill the holes for the two self-tapping screws that hold the inlet in place on the vehicle. Finally, a #2 Phillips bit or screwdriver, a small file, some Rustoleum or other metal paint, some silicone or other sealant, and some paper towels to dab paint onto the raw metal, and to clean up your mess with the sealant. :-) A special "thank you" goes to Joe Penska, WX2UA, for showing me some small tricks to prevent rust and to ensure that the project looks clean and neat.

Once I had everything I needed, it took me about an hour to do the whole job.

Here are the steps that I followed to install the AC power inlet:

1. Remove the 8 screws from the plastic panels inside the van, behind the driver's side tail light.
2. Feel your way from the inside, and decide where you want the outlet to be centered, and use a small drill bit on the outside to tap, and then scratch a spot where you want to center the AC power inlet.
3. Drill a small pilot hole from the outside where you made the mark.
4. Place the 1-3/8 inch hole saw on the drill, and carefully line up the mandrel bit over the hole you just drilled.
5. Setting the drill perpendicular to the vehicle wall, proceed to drill at low speed.
6. Once the mandrel bit punches through, be careful to hold the drill so that the hole saw bit stays engaged all the way around, and continue to drill until the hole saw punches through.
7. Using a file, or a sturdy knife that you can re-sharpen, de-burr the hole.
8. Using Rustoleum spray or canned paint, dab a LITTLE on a paper towel and then apply it to the raw metal edge of the hole -- while being careful not to leave paint where you don't want it.

There's A Hole In My Truck!!



A look at the completed project



Another look at the completed project



Assembly



Assembly and drill bit



Drill and bit ready to go

Big Ben

By: Fred Belghaus W2AAB

Years ago, there was a ham in Saddle Brook with a very big signal. He was known the world over as “Big Bill,” and he did not live on a hill. He had a big antenna and a big amplifier. That’s why he was famous.

But here’s another “big” ham with a big, big signal. He’s from Denmark, and his name is Ben. I think he deserves to be called Big Ben. His call is OZ8BV.

I worked Ben in March during the ARRL DX SSB contest on 40 meters at 1906 UTC (2:06 PM local time). Now, that may not seem like a particularly noteworthy DX contact until you consider that at that time of day on 40 meters, the only signals coming from DX land to this neck of the woods would normally be a handful of high power stations in Europe, but they would be weak, and unable to hear us on the East Coast because of strong signals in other parts of Europe which they were being bombarded by, due to short skip.

So how in the world did I hear a strong signal from him, and work him at that time of day? Well, it took no particular skill on my part. After all, since it was only SSB, all I had to do was press the push to talk switch on my D-104 mike and talk.

It certainly wasn’t my tired, 31 year old 100 Watt rig that did it. Neither was it my super-duper piece of wire in the form of a delta loop hanging from a big oak tree in my backyard. No, the heavy lifting was done by Big Ben’s station — especially his antenna. And *what an antenna!*

Here’s a picture of it....



Image: qrz.com

Big Ben, continued.

That tiny figure on the tower is Ben. The tower sports a stack of two 3-element, full-sized 40 meter Yagi beams. The longest element on such a beam would be some 69 feet, and the shortest about 63 feet. The low beam is 22 Meters high. That's just over 72 feet, and more than a half wavelength above ground. The high one is 46 Meters high, roughly 150 feet, or about 1-1/4 wavelengths above ground. The spacing between antennas is 24 Meters, or nearly 80 feet. These antennas are located right over a salt marsh. Off to the right of the tower, but not in the picture, is Ben's "little baby," a quarter wave vertical, placed over sea water.

Is it any wonder that I could work Big Ben at that hour on 40 meter SSB?

Oh, and as if that wasn't enough, after this picture was taken, Ben has also installed a full-sized 3 element beam for 80 meters. Its longest element must be about as big as 3 or 4 typical Fair Lawn houses laid end to end. Yikes!

If you're on 40 meter SSB and you haven't worked Big Ben yet... it's only a matter of time before you do.

73 and good DX,

Fred W2AAB

Health And Welfare Net Increases Personal Outreach To Club Members

Building on the night Health and Welfare net, a few club members have begun a quick note of outreach to make sure that members are ok and if we can help in any way.

President Nomar NP4H described the outreach as simply an email or phone call that asks "How are you doing?" and most importantly, "Is there anything we may do for you?"

We won't go into details, respecting HIPAA requirements; and if a member shares anything (private) we don't go beyond saying "He/she's ok" or "he/she has been under the weather"...

FLARC cares. We're all in this together.



Fair Lawn RACES/ARES Corner (Continued)

Our next FL-RACES KB2FLR net will take place on Wednesday, May 13th at 1845 hours on the Fair Lawn ARC Repeater as well as the NJ2BS Repeater (frequencies noted above). Thank you to the Fair Lawn Amateur Radio Club for permitting FL-RACES for using the repeater. Our monthly meetings usually take place right after the FLARC business meeting. Please join us for the next FL-RACES meeting. The volunteer efforts of our members are very much appreciated.

If you are interested in joining the Fair Lawn RACES, please contact me. Anyone who's a licensed amateur radio operator may join Fair Lawn RACES and there's no residential requirement.

For information regarding Bergen County RACES, please go to <http://www.bcnjraces.org>.

Thank you very much.

73
Dave KD2MOB

Theoretics Demystified

How would you describe frequency?

The number of cycles (dips and spikes, if you will) in a given span of time, usually in scientific terms, taken as the number of cycles, again positive and the negative excursions in a one second of time or cycles per second or cps for short.

A radio signal in its earliest form would fairly be described as changes in amplitude of the cycles per second at a stated frequency, that is the fattening or slimming down of a steady generated electromagnetic signal. This we call modulation. In its earliest form it was the peaks and troughs of that steadily generated radio signal. Hence Amplitude Modulation, or AM!

Since then there have been several other ways of altering a radio signal to impress information on it in a recoverable way. The one we have been talking about is amplitude modulation but later on came frequency modulation invented by Edwin Armstrong, or a way of shifting the base radio signal back and forth as a way of conveying information to the receiving party.

Then came phase modulation or a way of minutely shifting the transmitted frequency back and forth within ONE cycle to again convey meaningful information to the receiver of the same.

When you add to these methods the ability to embed or directly transmit digital encoded information alone or along with other information, you have a very powerful way of conveying vast data to an end user or a control device.

What makes this all so useful and useable is that there is a lot of what we call spectrum or frequencies we can use for conveyance of audio or digital information.

Continued in next column -->

Theoretics Demystified (Continued)

What makes this possible is that we can use resonant, or what we call tuned circuits, which will allow us to pick out the signal we want to work with or tune into. Heretofore this was done exclusively with tuned or resonant circuits which were composed of an inductor and a capacitor which as a pair allowed a specific frequency to pass while rejecting or at least attenuating all others. Now there is new software defined radio circuitry which mathematically and digitally does the same thing largely eliminating the need for tuned circuitry. This simplifies the radio environment and expands the communication possibilities.

The digital world had shrunken things down so much that inductors required for tuned circuits are behemoth compared to the components used in now everyday circuitry. Another necessary device used in communication is the amplifier. Now there is the class T or digital amplifier which chops up the signal into millions of pieces, amplifies it then reassembles it as the amplified signal! The claim to fame here is the extremely small space these digital amplifiers require! They are virtually micron sized in your cell phones and are the size of 2 cigarette packs for a twenty watt per channel rms stereo amplifier!!

The more common digital amp is class D which takes it's stabilizing feedback from a loop circuit whereas the class T takes it's feedback and control from the input itself. This makes it a better but more expensive amplifier. These digital amps are used almost exclusively for audio as the signal needs to be divided up at many times the highest frequency in use.

The fun part is that TUBES are coming back into use especially for audio amplifiers. Tubes bring a warmer sound to the audio experience. Forgive me if this has been a rambling column but these are tidbits that came to mind that I thought worth sharing.

73,
Fred Wawra, W2ABE

Static Discharge

[Upfront disclosure: Essay includes a somewhat wonky physics discussion]

Static discharge and lightning protection are related subjects. This column is in its third year and I have consciously avoided the subject of lightning protection. When it comes to protecting the gear in your shack, and other ancillary items like rotors, computers and transmission lines, there are multiple protection methods published and the methodologies vary widely. There are also myriad devices being sold that claim to provide “lightning protection.” You would think, or hope, there is one “best way” to protect your station from a direct or nearby lightning strike -- but there isn’t.

Your station lightning protection scheme depends on your station design. You might have a single 144/432 MHz ground plane on your chimney, or you might have a 100 foot tower 100 feet from your house. Those are different situations that require different mitigation techniques.

I designed and built N4GG to survive a direct lightning hit on any of the antennas and the design has passed the acid test. I had an 80 meter inverted vee take a direct strike some years ago and everything in the shack, as well as the antenna switches outside survived without damage, except of course the antenna. The antenna was vaporized. Fortunately, wire is cheap. N4GG is an all-wires-in-the-woods station; what works for me may not work for you – hence my reluctance to offer advice.

Static discharge is an easier subject to address. Static charge is a common occurrence on antennas and transmission lines, yet we may never be aware of it. Or, we may be VERY aware of it. I recall SEDXC members arriving, at night, at TI2N and setting up three K3s for an hour of operating before everyone went to bed. The next morning two of the three K3s had dead receivers. The antennas at TI2N were particularly prone to developing static charge and early K3s had nothing in the front-end design to prevent damage. The rigs had been left connected to the antennas overnight (which is typical at most stations most of the time).

What makes an antenna “static prone?” All “open-feed” antennas *will* develop charge – the only question is how much charge and what we do (if anything) to drain it off. Open-feed antennas include dipoles, verticals, and Yagis which use a gamma match or dipole driven element. If unsure – **open-feed antennas are any where an ohmmeter at the shack end of the transmission line reads an open circuit rather than a short** or some low resistance. We really are talking about resistance here too, not impedance. Static charge is DC, not RF. Size matters too of course. An 80 meter vertical will develop more static charge than a two meter ground plane.

To get an appreciation of the energy that can build up in an Antenna System it’s of great importance to consider the type and length of the transmission line as well as the antenna. I can’t stress this enough. The DC capacitance of RG-213 is 31 pF/foot. For RG-8X it’s 26 pF/foot. At DC (not RF) a length of coax can be thought of – to a first order approximation – as, simply, a capacitor. 200 feet of RG-213 is a 6,200 pF (0.0062 uF) capacitor. For RG-8X that’s 5,200 pF (0.0052 uF).

Without a static drain, static charge causes a small (well, usually small) current to flow into a coaxial cable capacitor and by doing so continually raises the voltage until something finally breaks down. When “something” breaks down the stored energy is released. I avoid math in this column where possible, but there is an important formula to help put this in perspective. The energy (Q) in a capacitor is $= \frac{1}{2} CV^2$. That’s 0.5 times the capacitance times the voltage squared.

Around The Shack

Let's look at an example. An un-terminated PL-259 at the end of a transmission line will arc-over somewhere around 10 KV. This number varies widely and depends on lots of things – but we need a number to help gauge what we are dealing with, so let's take 10 KV as a case in point. Remember, energy goes up as voltage squared. Every time we double the voltage on a capacitor, the stored energy goes up by a factor of four. 10,000 volts squared is 100,000,000 – starting to get the picture? The energy in 200 feet of RG-213 charged to 10 KV is 0.31 joules. Because most of us never work with joules, that might not sound like a lot but it is. A PL-259 arc-over will make a loud SNAP and that's more than enough energy to fry the front end of a receiver lacking protection for such an event. Ever hear a linear amplifier high voltage supply arc-over? You will never forget it – it sounds like a gun going off - **BANG!** The energy in an AL-1500 amp's HV capacitor bank is around 250 joules. 250 joules can easily kill you. There are bleeder resistors across HV capacitors for this reason (also to balance the voltage across capacitors in series).

Where does the charge come from that has a high potential to damage "something?" "Something" is whatever breaks down first. At times the atmosphere is charged (contains an electric field), particularly when a storm is nearby, and that charge gradient will produce a gradient on an antenna. Ever hear of Saint Elmo's Fire (check Wiki)? When static charge results in a high voltage gradient on an antenna, or tower, or ship mast, there may be a discharge into the atmosphere, which presents itself as corona. Static charge can also arise from wind (TI2N) or snow. Ever drag your feet on a wool carpet in low humidity or rub a balloon on a wool sweater? Ever see a Vandergraaf generator in action? A Vandergraaf generator is a great example of the phenomenon we are talking about. At the base is usually a small battery. A 1.5 volt AAA cell is all that's needed. The battery transfers a very small charge onto a moving belt and that charge is collected at the top in a capacity hat. With nothing to drain the charge, the voltage on the capacitor at the top just goes up and up and up, until something breaks down. Often what breaks down is the air surrounding the top of the generator.

Here is a real-world example I hope you never repeat:

I got very interested in 40 meter DXing while living in Orlando. Orlando is within the area known as the lightning capital of the US.

I had a 70 foot tower in those days and I decided I would mount a 33 foot tall (quarter wave on 40 meters) vertical at the top of the tower. The vertical was insulated from the rotor mast it was bolted to using PVC pipe sleeves. The tower and TH-6DXX at the top formed the "radials." The top of the vertical was at 103 feet and made a great lightning rod. I took that antenna down in under a week, despite the fact that my signal on 40 was fantastic. Why? That antenna was dangerous. My first clue came standing near the tower with a storm nearby. I was hearing a buzzing sound that would increase in volume over a few seconds, then abruptly stop. Then build up, then stop again. Over and over. Looking up I saw St. Elmo's Fire at the top of the vertical. St. Elmo's Fire makes buzzing sounds and a purple glow. Inside the shack, the PL-259 for that antenna was laying on the floor. Every few seconds it would arc-over. The arc discharged the antenna and coax, but it immediately started charging again. The buzz was the loudest just before the discharge arc. The antenna had no static drain and I could have added one, but I decided the capture area of that antenna, at that height, in Orlando, might destroy static discharge parts and it just wasn't worth it.

As an aside, I left the PL-259 for the TH6-DXX laying on the floor (shag rug – 1970s) once and when I returned there was a 4 inch diameter circle of charred rug around the connector. I'm assuming there was a fire retardant in the carpet that prevented the house from burning down. Those were the days before I learned how to protect against lightning and static charge by grounding the shack end of coax – always.

Around The Shack

So, if you are still reading, how do we prevent static charge from causing damage? Well, by draining it to ground before it builds up. It's simple. First, return the shell of PL-259s to ground. Second, drain the center conductor via an RF choke to ground or if you can't do that, then use a resistor – something like a 100K two watt resistor – from the center conductor to ground. The resistor won't conduct enough RF to matter, but it will drain DC current. The resistor or choke can be at the antenna, in the rig, or in a small box anywhere along the transmission line. Both wires of open wire line or ladder line should be grounded when not in use and both wires should have static drains which can save your receiver when the antenna is in use.

It's ironic that while vacuum tube rigs are relatively immune to static charge, they have internal static drains – typically in the form of an RF choke across the antenna connector. That choke isn't there as a static drain however, it's there in case the plate blocking capacitor fails. Such a failure places the rig's B+ on the antenna.

For three years I've avoided being critical of specific manufactures but I can't in good conscious not mention SteppIR at this point. SteppIR antennas will build up static charge three different ways - a trifecta of trouble. First, like any antenna, a SteppIR vertical will build static charge just by virtue of being in an atmospheric electric field. Next, moving a metal tape inside a fiberglass tube will generate charge – just like rubbing a wool sweater – THEY ARE THE SAME THING. Third, if you reduce the value of capacitance of a charged capacitor, the voltage across the capacitor goes up. It has to if you think about it. The amount of stored energy is constant, capacitance is going down, and so the voltage has to go up (see the formula above). A SteppIR element is a capacitor – the fiberglass tube is the capacitor's dielectric. Winding up the metal tape in a SteppIR antenna raises the static voltage on the tape! Fortunately, this is easy to fix – just add a static drain. From the factory, *SteppIR verticals have no internal static drain*. SteppIR Yagis may also have no static drain; I'm not as familiar with what's inside the Yagi EHUs as I am with the vertical EHUs, but I would guess they are the same. I added a 100K two watt resistor inside the EHU of a SteppIR "BigIR" vertical I owned for a brief time.

4U1UN came back on the air a few months ago and after 24 hours the receiver front end had fried. I dropped the licensee an email drawing his attention to the fact that someone had picked the worst possible antenna to place on top of the UN building (SteppIR vertical), hooked it to a long length of coax, and hooked that to the worst possible rig (which shall remain unidentified). I suggested that without a static drain he would be replacing the rig often; very often. It's telling it only took 24 hours (or less?) to happen the first time.

A factoid: At the base of AM broadcast towers you will always see a "doghouse." What's inside? Sometimes there are tuning components to match the mast to 50 ohms, and there is ALWAYS a large RF choke from the antenna mast to ground to drain off static charge.

Some things to think about:

- Grounding antenna switches, or disconnecting, are all you need to deal with static charge (not lightning) when *not* operating, but what about when you *are* operating? Something needs to drain the static charge off the antenna when you are operating with an open-feed antenna, just like AM broadcast stations do. Add a static drain (RF choke or resistor) if there is no existing static drain on your open-feed antenna(s).
- An easy way to fry a receiver front-end is to take an open-feed antenna's PL-259 that's unconnected to anything and connect it to a radio. Any static charge that has built up has to go somewhere. Guess where. An example of this would be to take the PL-259 hooked to a SteppIR vertical and simply plug (or switch with a non-grounding switch) it into a radio. Momentarily grounding the center pin to the shell of the PL-259 before connecting it will discharge any built up static charge, solving the problem if there is no static drain.

Around The Shack

Some antenna types:

Prone to Charge

Dipole
Base-fed vertical
Inverted Vee
Ground Plane

Yagi

Dipole feed
Gamma Match

Not Prone

Folded dipole
Shunt fed vertical
Inverted Vee Folded Dipole
5/8 Wave Shunt Fed Ground Plane
J-Pole

Hairpin match – center grounded
Tee match

Note: Some voltage balun designs drain static, others do not. **Current baluns do not drain static.**

I'm sorry for the length of this month's column – I hope you found it worthwhile!

73,
Hal

— • • • • —

What Have You Been Doing During Month 1 Of The Covid-19 Lockdown?

Karl W2KBF: Adapting technology in the ham shack

For the last few weeks Susan W6SKT and I have been spending more time in Swedesboro, NJ than in Fair Lawn because of the lower incidence of COVID-19 disease here and because of home remodeling. Recently, I did a thorough vacuuming and reorganization of my basement station... then made a significant improvement with the purchase of an ICOM 7300 transceiver, which is to the left in the photo below. I don't know how I got along before without a waterfall display. To the right are my vintage Brown Brothers key and paddles from the 1960s. The equipment stack includes the station power supply, an ICOM 7100 transceiver with attached LDG autotuner, a RemoteRig server and a Yaesu FT-100D transceiver on top.

The RemoteRig hardware permits me to operate the IC-7100 via the Internet when I am in Fair Lawn. This is important because, as ARES Emergency Coordinator for Gloucester County, I need access to the W2MMD repeater for the Gloucester County ARES net. The FT-100D serves a similar ECOMM role: All of the counties in Southern New Jersey are linked via System Fusion (C4FM) and I use the FT-100D to access the gateway station at Rowan University in Glassboro. I am showing only a small part of my "stuff". If I zoomed out, you would see shelves full of test equipment, old radio parts, etc.



Connecting a repeater remotely to EchoLink via SysOp

By Robert Holstrom, KD2BKD, 4/16/2020

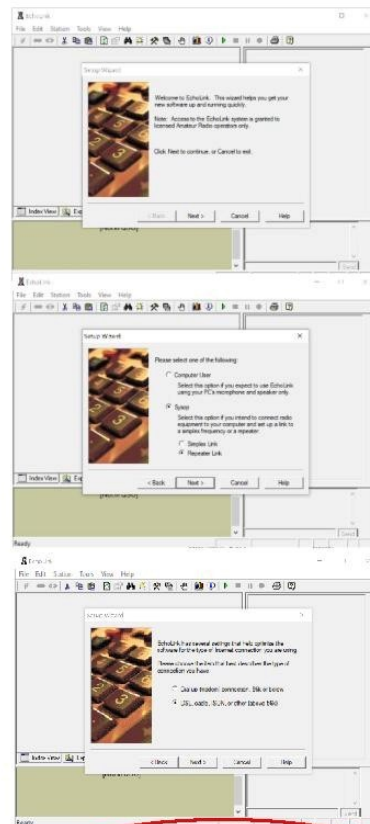
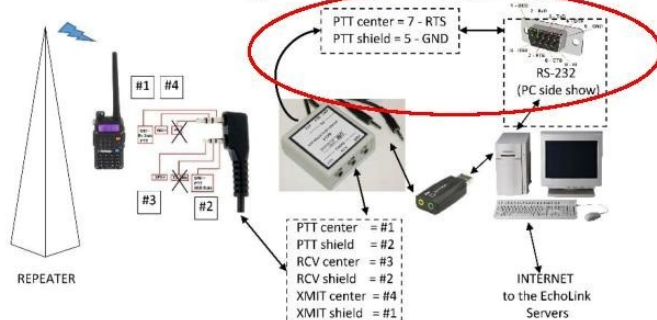
Last issue my updated writeup of “Connecting a repeater remotely to EchoLink” was about the hardware connections from the radio to computer. This is the way that the NJ2BS repeated is connected to EchoLink. This article is about the EchoLink software setup to connect a repeater remotely.

Opening EchoLink for the 1st time on a Windows PC and you will see the “Setup Wizard” come up. This helps setup the connection. Select “Next” at this initial “Setup Wizard” popup. The “Setup Wizard” is also available in the “Tools” menu then select “Link Setup Wizard...”.

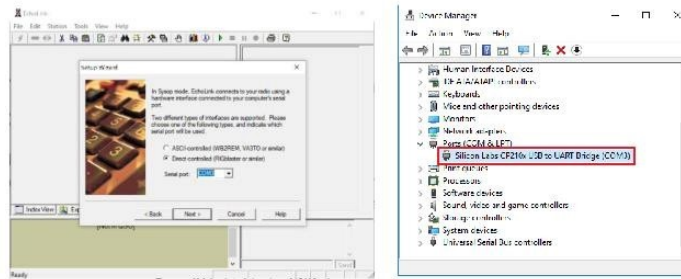
This will then bring you to the option of setting up a “Computer User” or “Sysop” connection. We are setting up a “Sysop” connection to a “Repeater Link”.

I would think that everybody has an internet connection above 56K by now.

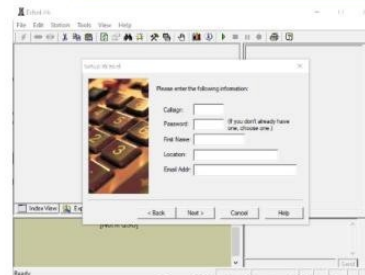
Now for more tricky option. In the previous article “Connecting a repeater remotely to EchoLink” there is a connection between PTT (push to talk) and the RS-232 port on the PC. This is a “Direct-controlled” method of accessing the PTT by the PC using the RTS (request to send) hardware handshaking signal from the RS-232 port.



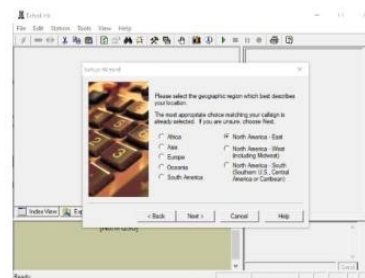
You will also need to know the “Serial port:” the PC will be using for this connection. If you are using a USB to RS-232 dongle/converter you will need to go to the PC’s “Device Manager” and look it up.



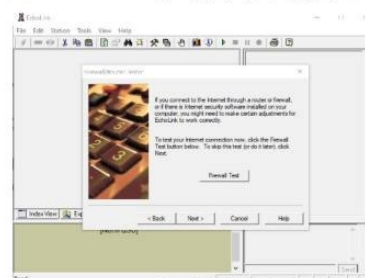
Now enter your, Callsign, Password, First Name, Location, and Email Address.



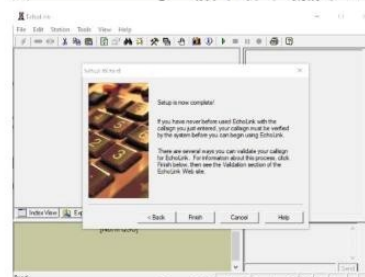
Next it will ask for your geographical region. This is to use the EchoLink server closest to your location.



Next is the “Firewall Test”. If you have a “Computer User” EchoLink connection, you should have already been through this.



Setup is now complete for the EchoLink side!



To manually see the setting of the SysOp settings in EchoLink go to the top menu “Tools”, then select “SysOp Settings...”. If you have any questions on the settings click the “Help” button on the lower right of the “Sysop Setup” popup for detailed explanations.

Via PC

EchoLink - KD2BKD-L

Time: Mon Apr 13 16:09:04 2020 UTC

[\[Refresh\]](#)

Status	Text View
Current state: Connected	EchoLink 2.0.908 W2NPT R (1)
Connected to: W2NPT R Fair Lawn ARC	
United States	W2NPT-R Fair Lawn ARC
Host: pool-173-63-169-223.nwknf.fios.verizon.net	KD2BKD-L Linked to N2IBS

Control Link Menu

☒ Link Enabled
 ☐ Receive Only

Station(s): Connected (check box to disconnect):

Call	Name	Connect Time (UTC)	Location	Hostname	Info
<input type="checkbox"/>	W2NPT R Fair Lawn ARC	12:52:38	Fair Lawn, NJ N020xx	pool-173-63-169-223.nwknf.fios.verizon.net	Info

☐ Send TO Now
 ☐ Disconnect
 ☐ Connect to:

Recent System Log Entries (reverse order)

```

2020-04-13 16:09:04 Connected W2NPT-R Fair Lawn ARC 190601 173.63.169.223
2020-04-13 16:05:27 W2NPT-ARC 24.44.214.132
2020-04-12 21:27:14 W2NPT-ARC 24.44.214.132
2020-04-12 21:27:03 Disconnect W2NPT-R Web command
2020-04-12 21:27:01 W2NPT-ARC 24.44.214.132
2020-04-12 16:46:16 W2NPT-ARC 24.44.214.132
2020-04-12 16:06:02 Connected W2NPT-R Fair Lawn ARC 190601 173.63.169.223
2020-04-12 09:40:13 W2NPT-ARC 24.44.214.132
2020-04-11 22:23:13 Disconnect K2UEE Web command
2020-04-11 22:23:11 W2NPT-ARC 24.44.214.132
2020-04-11 22:20:04 Connected K2IBS Fair R 65332 44.137.75.248
2020-04-11 22:15:02 verifying station info 44.137.75.248
2020-04-11 22:12:10 Disconnect W2NPT-R Web command
2020-04-11 22:02:00 W2NPT-ARC 24.15.214.132
2020-04-11 20:10:14 Disconnect W2NPT-R Web command disconnect
2020-04-11 18:21:13 Connected K2IBS Radio 65365 223.110.150

```

[illegible]

Ham Nation “Health and Welfare Net” Interviewer

By Robert Holstrom (KD2BKD) - April/29/2020

I hope everyone has seen the great interview Ed Efchak (WX2R) did on Ham Nation, https://www.youtube.com/watch?v=XwpPeBX_K418 about the FLARC Health and Welfare Net. Ed did a great job publicizing FLARC. Because of the interview we have had many check-in from as far away as Alaska.

But what intrigued me was WHO interviewed Ed. It's Bob Heil (K9EID). Many know that Bob Heil is a prominent Ham Radio Operator who founded the company <http://www.heilhamradio.com> and their great microphones and headsets. Many do not know his many other accomplishments in the audio industry.

Bob Heil is a Sound Engineer who founded “Heil Sound” in the mid-1960s. He started setting up local small live sound systems in the St. Louis area as the audio technician. His break was when the “Grateful Dead” was to play the Fox Theater in St. Louis in 1970.

The “Grateful Dead” needed someone to setup the audio system and their current technician was not available. A stagehand at the Fox Theater told Jerry Garcia about Bob Heil. Bob was called by Jerry to do the setup. He used his old organ speakers and radial horn tweeters. No one was using radial horns in live performances before, but they did make a big difference in the lyrical quality of the performance. Bob also setup his studio recording console which was modified specifically for live performances. To stop feedback problems Bob devised a way to mount a second microphone, wired out of phase, which was a new idea in the industry. Bob, his equipment, and his “crew” were asked to join the “Grateful Dead” on tour.

Next was “The Who.” “The Who” used a more potent and enhanced audio system designed by Bob Heil -- and off on tour Bob and his “crew” went. Pete Townshend and Bob Heil got along very well and Pete had Bob design the quadraphonic sound system used on the “Quadrophenia” tour.

Continued in next column ->

Other acts Bob and “crew” toured with were, Joe Walsh (WB6ACU), Peter Frampton, and Jeff Beck.

Another Bob Heil design is the “Talk Box” made famous by Joe Walsh, Peter Frampton, and Richie Sambora, used to create many popular songs.

Bob's company was also involved in custom home theater setups in the late 1980s.

Article written by Bob Holstrom (KD2BKD)
Audio Test Engineer for CRESTRON (1998-Present)
Test Engineer for CREST AUDIO (1990)

— • • • • —

In A Nutshell

Unfortunately, but for a good reason, there is no Hamvention and probably no other hamfests this year. We will miss the opportunity to buy all of that stuff we really do not need, but mostly we all are going to miss the fellowship and good times we have meeting others face to face.

Thankfully, we as hams, can meet each other on the radio! Contests and the amount of contacts that can be made can be rewarding (I know as I am a contester of sorts, limited now by antenna problems) but maybe now is the time to slow down and let the other ham know how much you appreciate hearing his or her VOICE, the human connection which has been brought home as being so priceless in this time of trouble.

This invisible menace has served to remind us how fragile and temporary we all are and that the important thing is not really the equipment, but how we can use the equipment to relate to, and help each other.

Using common sense and precautions, we WILL get back to some kind of normal and back to having hamfests and all of the other activities we all have enjoyed in the past.

73,
Fred Wawra, W2ABE

Correspondence To FLARC On Our *Health and Welfare Net*

Dear Fair Lawn ARC,

My name is Bill, K4FZE and I am the president of the Greene County Virginia Amateur Radio Club here in central Virginia.

I have been informed by Ed KW4GF, our local Public Information Coordinator for the ARRL Virginia Section, that you were the first club in the nation to conduct a “Wellness Net” during the current virus pandemic. Congratulations on being first with your service. Our club was the second group to do a wellness net in the nation as we started on March 15th.

We are delighted to see our hobby being used for yet another worthy cause. Keep up the good work.

This is our reply to the Greene County Virginia ARC:

Bill,

Thank you for your congratulatory note to The Fair Lawn Amateur Radio Club on the creation of our *Health and Welfare* net and let us return the good words to The Greene County Virginia Amateur Radio Club on your complementary efforts in these difficult times in central Virginia. Ed KW4GF and I met on last night’s ARRL Public Relations net and briefly exchanged notes regarding our individual efforts.

As you well know, northern New Jersey has been especially affected by this relentless virus. Our home county of Bergen, which is located just west of New York City, now has more than 15,000 reported cases claiming more than 1,000 lives. Our nightly net has attracted nearly 100 hams from across the country conveying both vital information and messages of personal support.

Your group’s foresight and efforts in starting your net will not go unnoticed by our club. We commend you for your efforts in vital public service to your members and your communities.

73

Ed Efchak WX2R
Public Information Officer
Fair Lawn Amateur Radio Club
10-10 20th Street
Fair Lawn, NJ 07410
802-282-6700
www.FairLawnARC.org



April 30, 2020

Not Quite Yet “Au Revoir” If You Have Not Yet Paid Your Dues

The due date for member dues has been extended to **May 31st**. But don't put it off, as dues for 2020 are now being received by our Treasurer, Al WA2OWL.

Dues remain at the same level as they have for many years while the club has grown in size and activities. Renewals are \$25 per year; new members are welcomed at \$20 per year.

This year we renewed over 85% of our 2018 members; quite a feat with a base membership number of around 145.

The FLARC member count closed 2019 at 160.

Dues can be mailed directly to:

Al Rasmussen WA2OWL
10 So. Shore Road
Denville, NJ 07834



At deadline we have renewed **129** members for 2020; a remarkable feat since we have not had our usual points of contact and regular mail delivery.

Please help get us to 130 and... above. If you have not renewed, NOW is the time.

Or, if you're a guest to this newsletter... why not join FLARC?



FLARC "Year of Learning"

To be decided	How many ways do hams use CW ?	Fred W2AAB
To be decided	Logging and QSL Bureaus	Jim W2JC
What Can You Contribute To The Club??!!		

Ed-itorial:

Welcome To The Hotel Coronavirus

It has been about six weeks since we've been in Covid -19 lockdown with at least another four or more on tap as this is written.

It is clear that a return to normalcy is not in the cards and that we will have to re-think how we do what used to be unthought-of club activities.

To me, the primary concern will be activities surrounding the clubhouse. The short-term question is "when will it re-open?" but the more important question is "how will it operate given restraints regarding social distancing?" Access will certainly be limited by the town and how we manage a more limited capacity to attendance will have to be sorted out by the Council after knowing the constraints enacted the by state, county, and borough.

A wild card is also how the borough chooses to operate the Rec Center given its current state once this all settles down. Only time will tell but history is full of "unintended consequences." Will we be spending more time looking back, repairing, and plugging holes — or will we be looking ahead and trying to accelerate down this road we haven't been before?"

Stay safe.

DE Ed WX2R

What Have You Been Doing During Month 1 Of The Covid-19 Lockdown?

We've asked a random selection of club members what they have been up to radio-wise while waiting out the coronavirus. Here's what we've learned... more next month (but we hope to be free soon).

Bob: KD2BKD

My upcoming SPACE project for the virus lock-down.

As we are all confined to our houses, why not try to contact the ARISS (Amateur Radio International Space Station). Most amateur radio people have what it takes to do this. I have tried before the lock-down but the APRS from ARISS was down for weeks. Here is what it takes to do it.

A 2-meter directional antenna. This can be a simple tape measure yagi, moxon, or log periodic. Commercial antennas by Arrow (<http://www.arrowantennas.com/arrowii/146-437.html>) and Elk (<https://elkantennas.com/product/dual-band-2m440I5-log-periodic-antenna/>) work very well for this. I will be using the Elk.

A 2-meter radio. It can be a HT, mobile or base station radio. I will try my Wouxon HT and if that can't make it, I'll get out my Kenwood TS-2000. The simplex frequency for ARISS APRS is 148.825MHz.

APRS program/app/software. I use APRSdroid on my Android smartphone. This can be done acoustically by putting the mic/speaker from radio close to smartphone. I am sure there is "I" device applications to do the same. A cable from phone to HT is also available (<https://www.amazon.com/BTECH-APRS-K1-Interface-APRSdroid-Compatible/dp/B01LMIBAZW>). On the PC I use "UISS" software with custom audio interface like Signalink to connect to the TS-2000.

A computer program or smartphone app to track the ISS is also good to have. To see the different contacts made to the APRS ARISS go to: www.ariss.net
More on this I hope next month after I make an APRS contact from ARISS.

— • • • • —

Glenn KD2MDR

Stuck in the office.

I've had to continue to go into the office during the Virus, although it's been very quiet at work. As a result, I haven't had time to do any ham projects.

Been on the lookout for special event stations, but they have been sort of non-existent.

— • • • • —

Fred W2AAB

Working DX among other things.

W2AAB has been happily chasing DX, operating in contests, and doing a lot of writing, not only for The Resonator. His latest work, just finished, is a Sherlock Holmes pastiche story, which he is sharing with another FLARC Sherlockian, and with any others who might be out there and interested in reading it.

May 2020 Meeting Notes

FLARC Business Meeting Minutes 1 May 2020

President Nomar NP4H called the meeting to order at 7:30 p.m. on a video conference.

The group recited the Pledge of Allegiance.

Secretary Randy WU2S called the roll of officers and trustees and all were present. The meeting had a quorum to conduct club business.

Secretary Randy WU2S announced that the minutes from the April meeting were sent to all members of record and published in the club's newsletter, The Resonator, which is on the club's website at <http://newsletters.FairLawnARC.org>. He asked the members present if there were any corrections or amendments needed. There were none so Van W2DLT moved to accept the minutes as published and Skip KD2BRV seconded the motion. The motion passed by acclamation.

Treasurer Al WA2OWL read this month's Treasurer's Report. Ed WX2R moved to accept the report as presented and Gene WO2W seconded the motion. The motion passed by acclamation.

Randy WU2S said that there is no Tech Committee report this month.

Randy WU2S read the report from Ed WX2R from the Publicity Committee:

- All speaker programs and other public events are cancelled up to Field Day.
- We have done a press release for the re-start of the Kawfee Tawk series with the first being for Bob N2SU on 6-meter propagation, and we will circulate the press release locally, through the ARRL and on QRZ.
- We have publicized our Health and Welfare net and it has received mentions in the ARRL newsletters, QRZ, Southgate Amateur Radio News (UK) and the ICQ Podcast (UK). Ed spoke with Bob Heil of the Ham Radio Nation podcast and was interviewed for the April 22nd show.

May 2020 Meeting Notes, continued.

- We will attempt to continue to publish The Resonator on a regular schedule.

- We have offered a complimentary subscription to The Resonator for those non-members who have checked in on the Health and Welfare net as both a thank you and a possible member recruitment tool while the clubhouse and activities are unavailable.

Jim W2JC reported that the FLARC web site is kept current. Please check there for current notices as well as to see twitter notices if you are not following us on Twitter directly. Club notices and other brief items of interest are tweeted on twitter. Follow us at @FairLawnARC on Twitter. Our private group at <https://groups.io/g/FairLawnARC/> provides an archive of messages as well as the club calendar and other files of interest, such as the club roster. Subscribing to our groups.io is the best way to keep informed of all club info.

Thom W2NZ reported that our subscribers list on our YouTube channel increased by 18 in the past month to a total of 432.

David KD2MOB announced that the weekly Fair Lawn ARES net on Wednesday evenings moved to 6:30 pm on the W2NPT repeater. This earlier time will allow the new daily FLARC health and welfare net to start at 7:00 pm daily. David reported that the ARES net conducted training sessions on formal message traffic conducted by Hank WA2CCN and Karl W2KBF.

Vice President John W2JLH said that our plan for Field Day looks unfeasible due to the shutdown. It is unlikely that Memorial Park will be open or that large gatherings will be permitted in Fair Lawn anytime soon. Randy WU2S mentioned that the rules permit a group to operate in the (E) emergency class from home and combine scores. Members would have to use generators or batteries instead of normal mains power. Ed WX2R said the ARRL is taking no position on the effects of the pandemic and has not changed Field Day rules since any restrictions on gatherings are a local matter. Jim W2JC reported that the developers of the N1MM logging program added an enhancement to the code so that a group of remote people could combine their logs into one central log over an Internet connection.

— Continued on next page.

May 2020 Meeting Notes, continued.

Additional comments and suggestions were offered by Gene WO2W, Gordon W2TTT, Jim N2JLF and others. President Nomar NP4H asked members to contact John W2JLH with their ideas and suggestions for our participation in Field Day this year.

Gene WO2W reminds everyone that the Fair Lawn Recreation Center and the Senior Center remain closed. He said there has been some talk of reopening on June 1st at the earliest, but that date is uncertain. Gene has contacted Jimmy Graff about recovering any mail for the club.

Ed WX2R reminds members that FLARC annual dues should be sent directly to Treasurer Al WA2OWL at his call book address. [see QRZ.com]. President Nomar NP4H said that the FLARC Council will discuss using PayPal for payment of club dues and will notify the members soon.

President Nomar NP4H said we would conduct our "Kawfee Tawks" on a videoconference. The next to be scheduled is Bob N2SU on "6 Meters – The Magic Band" on Friday May 8. Bob KD2BKD will tell us about DMR radios on Friday June 19. Charlie AA2VU will conduct a talk on July 17.

David KD2MOB reports that our daily Health and Welfare net on the W2NPT repeater at 7:00 pm is going strong. President Nomar NP4H said that he and Ed WX2R are keeping track of net check-ins. Nomar asked for volunteers to contact FLARC members who have not checked in to make sure that they are OK.

Van W2DLT reported that Carole KD2NMV is in a care facility in Wyckoff. Judith KC2LTM said that Carole has been there since Thanksgiving and is doing well. Judith reported that Gordon W2TTT took a donated HT to the facility to give to Carole so that she could stay in touch with local hams. Judith also sent Carole a get-well card on behalf of the club.

Gene WO2W reported on the possibilities of remote VE testing sessions. He has asked the Recreation Department if the parking lot at the Rec. Center could be used for such sessions. Gene needs to know how many volunteer examiners would be available to help if this effort comes to fruition.

May 2020 Meeting Notes, continued.

Ed WX2R noted that FLARC was the first ham radio club in the nation to begin a daily health and welfare net. He said we received congratulations from several sources, including a radio club that was the second to do the same.

Kevin K2KCC reports that he is doing better and thanks FLARC members for their concern.

Steve KA2YRA and other members discussed using a green screen for Zoom videoconference and changing the background. Van W2DLT mentioned that it is possible to change the appearance of your name on Zoom by right clicking your name in the lower left of your image box and selecting "Rename". If you change it, please use your callsign so that everyone recognizes who you are.

Noel W2MSA thanked the FLARC Council for their efforts to keep the club running during these challenging times.

Having no further business, President Nomar NP4H asked for a motion to adjourn. Dave N2AAM so moved and Van W2DLT seconded the motion. The members present voted in favor and the meeting was adjourned at 8:42 p.m.

Secretary Randy WU2S reports that 40 members participated in this video conference business meeting.

Respectfully submitted,

Randy WU2S,
Secretary

— * * * —

To the FLARC Leadership team & Membership,

After much tossing & turning and finding myself unable to get to sleep tonight, I decided to check my E-mail and came upon the Minutes E-Mail. All I can say is you are doing an outstanding job!!! Despite the absence of eyeball meetings FLARC has done the impossible by creating a virtual web of activities to keep members in touch with each other. From a multitude of "virtual" tools like FB, You Tube, Twitter, the Web site, ZOOM meetings, educational on-line activities, and increased participation in on-air nets ... FLARC is doing an outstanding job in helping us keep in touch with one another. In lieu of a hand shake (forbidden under current social-distancing guidelines .. HI .. HI) ... please give yourselves a very well-deserved .. "pat on the back."

You all deserve a resounding Standing Ovation.

73,
Lou N2CYY